



ON LOAN



Cheshire County Council

Health Services 1970





J. B. LECK, Esq., J.P., Chairman, County Health Committee

Cheshire County Council

**Annual Report
for 1970 by the
County Medical Officer
and Principal School
Medical Officer**

B G Gretton-Watson

MA MB B.CHIR DPH Barrister at Law



B. G. GRETTON-WATSON, M.A., M.B., B. Chir., D.P.H., Barrister-at-Law,
County Medical Officer and Principal School Medical Officer.

STAFF AT 31.12.70

County Medical Officer and Principal School Medical Officer	B. G. Gretton-Watson, M.A., M.B., B.Chir., D.P.H., Barrister-at-Law
Deputy County Medical Officer & Deputy Principal School Medical Officer	W. D. Dolton, M.A., M.B., B.Chir., D.P.H.
Chief Dental Officer	T. B. Dowell, L.D.S., R.C.S., B.D.S.
Administration	
Deputy Administrative Officer	G. Good
Mental Health Service	
Principal Medical Officer	R. A. Blyth, M.B., Ch.B.
Chief Mental Welfare Officer	T. Rattray, M.S.M.W.O.
Senior Administrative Assistant	B. S. Hulbert, D.M.A., M.I.L.G.A.
School Health Service	
Principal Medical Officer	Irene Chesham, M.B., Ch.B., D.P.H.
Senior School Medical Officer	R. Cargill, M.B., Ch.B.
Health Education Officer	R. W. Rossington, Dip.H.E.
Senior Administrative Assistant	R. McLean, D.M.A.
Child Health Nursing and Handicapped Persons	
Medical Officer	Glenice Heaton, M.B., Ch.B., D.P.H.
Chief Nursing Officer	Miss P. Wright-Warren, S.R.N., S.C.M., H.V., Q.N.
Senior Administrative Assistants	A. G. Stevenson L. T. Burton P. Allen
County Ambulance and Transport Officer	R. Glyn Jones, F.A.I.O.
Chief Administrative Assistant (Research)	B. O'Connor, M.A., Barrister-at-Law
County Public Health Officer	W. Pembleton, F.R.S.H., M.A.P.H.I.
Divisional Medical Officers	
Altrincham	W. Davidson-Lamb, M.C., M.B., Ch.B., D.P.H.
Bebington	H. C. Jennings, M.B., Ch.B., R.C.O.G., D.P.H.
Cheadle and Wilmslow	J. A. Leitch, M.D., Ch.B., D.C.H., D.P.H.
Crewe	D. G. Crawshaw, M.B., Ch.B., D.C.H., D.P.H.
Deeside	D. R. Morris, M.B., Ch.B., D.P.H.
Hyde	T. Holme, M.B., Ch.B., D.C.H., D.P.H.
Macclesfield	W. R. Plews, L.R.C.P. & S., D.R.C.O.G., D.P.H.
Mid-Cheshire	J. E. O'Malley, M.R.C.S., L.R.C.P., D.P.H.
Nantwich	D. G. Crawshaw, M.B., Ch.B., D.C.H., D.P.H.
N.E.Cheshire	T. W. Brindle, M.B., Ch.B., D.P.H.
Runcorn	J. E. O'Malley, M.R.C.S., L.R.C.P., D.P.H.
Sale and Lymm	W. Davidson-Lamb, M.C., M.B., Ch.B., D.P.H.
S.E. Cheshire	L. Rich, M.B., Ch.B., M.R.C.O.G., D.P.H.
S.W. Cheshire	W. A. Pollitt, M.R.C.S., L.R.C.P., D.P.H.
Stalybridge and Dukinfield	T. Holme, M.B., Ch.B., D.P.H.

INTRODUCTION

To the Chairman and Members of the County Health Committee.

Mr. Chairman, Ladies and Gentlemen,

I present herewith my annual report for the administrative county of Cheshire for 1970, which deals solely with events taking place during that calendar year.

I should like to welcome Mr. J. B. Leck as chairman of the committee from 1st April 1970. At the same time I should like to express my thanks to the retiring chairman, Sir George Astbury, for all the help and support he has given me in the past. Sir George had been chairman for 20 years, and will be remembered for the many developments which took place in the department during his term of office.

During the year Dr. A. H. Snaith, who had been my deputy for 3 years, and did so much to develop the use of the computer for health purposes, left to become county medical officer for Derbyshire, and Dr. W. D. Dolton, from the West Riding of Yorkshire, was appointed in his stead. Mr. D. Page, who had been appointed in 1968 as administrative officer, left to take up the post of deputy county treasurer for Flintshire, and Dr. Isobel Craighead left after 3½ years as principal medical officer for child health and nursing.

The mid-1970 population was 1,078,380. The live birth rate (16.3%) showed a further slight fall. The illegitimate birth rate (6% of total live births) was substantially the same as last year. Infant mortality (17%) showed a slight rise on last year (16%), which was a record.

The death rate (11.5%) was also slightly up on last year (11.32%). The pattern of causation of deaths remains broadly the same—ischaemic heart disease and cerebro-vascular accidents (both up on 1969) being by far the commonest causes of death. Bronchitis (565) is down in comparison with last year (599) but carcinoma of the bronchus is up (582 compared with 516). The rising trend of “smoker’s death” shows no sign of reversal.

There was no case of smallpox this year. There has been no case in the county of poliomyelitis for three years and no case of diphtheria for ten years.

The incidence of whooping-cough and measles was in line with the general trend, but up on last year when the figures were abnormally low. Much the same could be said for tuberculosis—in line with the general trend, but up on the abnormally low year of 1968.

For the newly transformed child health service the year was one of consolidation rather than innovation. More areas are now following the new routing; 57 out of 100 doctors, and all health visitors have now attended explanatory courses on developmental paediatrics which form the basis of the work of centres.

The genetic counselling clinic in Macclesfield began in March and has been much appreciated. Being conducted by the reader in medical genetics at Manchester University, it not only provides advice and counsel for parents but also fulfils a teaching role, as the clinics are attended by general practitioners and departmental medical officers.

The last annual report contained reference to a study on the needs in the county for day-care facilities for the pre-school child. The newly appointed organiser has

continued to co-ordinate all activities in this field and the ten-year plan for day nursery provision is ready to be implemented so far as finance can be made available. The private sector (play groups and child minders) continued to expand, and application has been made (and agreed) to include in the Urban Programme (Phase 3) the sponsoring in private day-care establishments of children in geographical areas of greatest need.

The fact-finding enquiry regarding illegitimate children has been continued this year, and the information will be useful in forward planning. The suggestion made last year that illegitimacy was becoming more accepted by the public is confirmed—the number of children being adopted is falling, and so too is the need for special mother and baby homes like Prospect House. This trend certainly could not have been foreseen even five years ago.

County dental work among mothers and young children has increased this year by 22%. This is encouraging, and I wish that recruitment to the public dental service was good enough to include regular dental inspection for the pre-school child as part of the new child health centre routine.

With regard to the nursing staff, this year has seen the Mayston report on nursing management within the local authority service (which was broadly accepted by the authority), also a study into nurse work-loads and methods of working upon which future staff establishment changes are likely to be based. The effect of a joint report on these subjects will be reported next year.

The scheme for attaching nursing staff to general practitioners is nearing completion. By the end of the year a population of 711,300 was covered. Soon we shall be ready to tackle the involved problem of attachment to general practitioners who have patients in more than one authority's area.

Regarding health centres, as explained in a previous report, the building and equipment, and the establishment of a sound management structure for them, have been looked upon as the major priority for the department. At the end of the year five were at various stages of construction and seven others due for a start during the next year or so.

The Northwich clinic centre, which is combined with offices and with the nurse training centre for the county, was completed in 1970.

In the field of mental health the first stage of a ten-year plan for providing community care for the mentally ill (as opposed to the subnormal) was implemented. This took the form of rented council houses in which the mentally convalescent persons can live in the community, under minimal supervision—the first such council house was occupied during the year. The Heswall adult training centre and the junior training centres at Neston and Altrincham were completed and came into use during the year, also extensions at Eastham, Macclesfield and Crewe. An adult hostel was opened at Stalybridge and a junior hostel at Neston.

Services for the physically handicapped were augmented by the opening of the centre at Northwich, and further centres were under construction by the close of the year.

The public health section of the department has been engaged in conducting a survey of the sanitary circumstances of schools and school kitchens. It has also been busy in revising the code of practice for all county catering establishments. The section has also played an active part in conjunction with the schools meals service in exploring the possibility of use by the county council of frozen foods,

which are associated with certain health problems. It is also working out, jointly with the county architect and the director of education, a code of practice for the construction and equipment of food premises.

In the ambulance service Wrenbury Hall has been fully occupied with training, and though no definite national training plan has been settled it is hoped that Wrenbury will form an essential part of it. Following the example of the North Riding scheme, several general practitioners in South Cheshire are co-operating with the service in responding personally to road accident calls. They have, at their own expense, equipped themselves with radio and other equipment.

The management advisory unit is carrying out an enquiry into the pattern of demand in the ambulance service, to determine any possible scope for increasing efficiency and also to highlight any possible misuse of the service.

The health education officer has been very active during the year, training staff, giving lectures, preparing material and co-operating with the education department in the preparation of the booklet "A New Look at Health Education in Schools". Much preventable illness today rests on human habits and behaviour, and I therefore believe that health education will increase in importance.

The work of the occupational health service has further developed. Its long-term object is to deal with all problems affecting the health of staff in relation to their occupations. Much of this work is already done, but in piecemeal fashion. The service has been concerned with the question of fitness to be granted heavy duty vehicle driving licences (affecting the fire brigade and surveyor's department), and also the new standards of fitness for the fire service including follow-up examinations. It is to be hoped that national standards, or at least a code of practice, will be drawn up for ambulance personnel.

Computer management of the vaccination and immunisation programme has made further headway. By the end of the year fourteen of the fifteen divisions were covered, and 203 general practitioners were using the scheme to plan the procedures in their own practices. There was, in the spring, a serious interruption in the supply of measles vaccine (some consignments had to be withdrawn), and this meant that the programme could not be fully resumed for six months. This experience has highlighted the need for reserve plans to back up computer arrangements in the event of factors such as these wholly outside our control.

The year saw the start, on a scale initially limited by supplies, of the offer of vaccination against rubella (German measles) to girls aged 11-14 years, with a view to preventing this disease occurring during pregnancy. It is interesting to note that the director of the Manchester public health laboratory has kindly offered his services to test the level of immunity against rubella possessed by school teachers of child-bearing age. This valuable information will reduce the need for precautions in respect of staff during the occurrence of the disease in schools.

The research section is consolidating its position as a centre of information (including charge of the library), and of investigations into specified subjects to evaluate the efforts of the department and to form the basis of long-term planning for the future. A useful arrangement has been arrived at, in that one of the members of the section now spends some time doing post graduate work at the department of social and preventive medicine of Manchester University, thus bringing the benefit of university resources into county council investigations. The research section also gives advice (e.g. in statistical matters) to other sections in the department carrying out smaller investigations.

My thanks are due to all those who have contributed to this report, including Dr. Dolton, Dr. Chesham (School Health), Mr. Dowell (Dental), Dr. Holmes-Smith (Ophthalmic), Mr. Pembleton (Environmental) and particularly to Mr. O'Connor who has again acted as editor.

I should also like to thank the county health committee and particularly the chairman and deputy chairman for their constant support. My thanks are due to all the staff of the department, professional and other, also to the clerk of the county council, the county treasurer and other departmental heads for their continual co-operation and help.

B. G. GRETTON-WATSON,

County Medical Officer.

June 1971.

CONTENTS

VITAL STATISTICS AND GENERAL	13
CHILD HEALTH	17
NURSING SERVICES	25
MENTAL HEALTH	31
PHYSICALLY HANDICAPPED	39
ENVIRONMENTAL HEALTH	45
AMBULANCE SERVICE	59
HEALTH EDUCATION	63
OCCUPATIONAL HEALTH	69
VACCINATION AND IMMUNISATION	73
RESEARCH	77
OTHER SERVICES	81
HEALTH SERVICES STATISTICS	85
SCHOOL HEALTH	97
SCHOOL HEALTH STATISTICS	120
INDEX	126
COUNTY DISTRICT STATISTICS	127

**VITAL STATISTICS
AND GENERAL**

VITAL STATISTICS AND GENERAL

Area

The area of the administrative county at the end of 1970 was 622,042 acres as calculated by the Ordnance Survey for the Registrar General.

Population

The population of the administrative county estimated by the Registrar General for mid-1970 was 1,078,380.

Rateable Value

The rateable value of the administrative county for general county rate purposes at 1.4.70 was £48,100,196. An old penny rate for 1970-71 represented the sum of £199,095.

Live Births

					Male	Female	Total
Legitimate	...	...	...	...	8640	7963	16603
Illegitimate	...	...	...	...	540	488	1028
					<hr/> 9180	<hr/> 8451	<hr/> 17631

Birth rate per 1,000 population, 16.3.

Illegitimate Live Births were 6 per cent of total live births.

Stillbirths

					Male	Female	Total
Legitimate	...	...	...	...	103	99	202
Illegitimate	...	...	...	...	11	9	20
					<hr/> 114	<hr/> 108	<hr/> 222

Stillbirths rate per 1,000 total (live and still) births, 12.

Deaths

Male	Female	Total
6262	6137	12399

Death rate per 1,000 population, 11.5.

The principal causes of death continued to be heart disease, malignant diseases, and vascular lesions of the nervous system.

Infant Mortality

Number of deaths of infants:

					Under 1 year	Under 4 weeks	Under 1 week
Legitimate	...	...	...	...	274	179	147
Illegitimate	...	...	...	...	29	22	18
Total	...	..	...	...	<hr/>303	<hr/> 201	<hr/> 165

Mortality rates per 1,000 live births:

					Infantile	Neonatal	Early Neonatal
Legitimate	...	...	...	...	17		
Illegitimate	...	...	...	...	28		
All Infants	...	...	...	...	17	11	9

Perinatal Deaths

Stillbirths	...	...	...	...	...	...	...	...	222
Deaths under 1 week (early neonatal)	...	...	...	...	...	...	...	...	165
Total perinatal deaths	...	...	...	...	...	...	...	...	387

The perinatal mortality rate per 1,000 total (live and still) births was 22.

Deaths from Puerperal Causes

	Deaths	Rate per 1,000 total (live and still) births
Pregnancy; childbirth; abortion ...	2	0.112

Building Programme

PROJECTS COMPLETED 1970

Clinic Centres—Northwich (with offices and nurse training unit)

Handicapped Persons Unit—Northwich

Training Centres (Adult) — Heswall

(Junior) — Neston

Altrincham

Eastham (ext.)

Macclesfield (ext.)

Crewe (ext.)

Hostels (Adult) — Stalybridge

(Junior) — Neston

Ambulance Stations—Macclesfield (12-bay)

CURRENT PROJECTS (cost limit received)

Year of Proposed Start

	1970-71	1971-72
Health Centres	Runcorn Castlefields Heald Green Sale (Bodmin Road) (ext.) Sale (Conway Road) (ext.)	Bramhall Sale (Meadway) (ext.) Holmes Chapel Nantwich Winsford (High Street) Romiley Tarporley
Ambulance Stations	Congleton (8-bay) Sandbach (8-bay)	Sale (6-bay) Winsford (6-bay)

CHILD HEALTH



NESTON CLINIC CENTRE

General Practitioner's Medical Examination

CHILD HEALTH

Clinics

The year has again seen steady progress towards the Sheldon concept of a child health clinic.

The child health centre, which is the successor to the child welfare centre, now combines the traditional services of the child welfare centre with a new service concerned with the development of children. Screening procedures are carried out at specific times in the child's life to ascertain whether he or she is following the normal pattern of development. The screening procedures are comprehensive in nature and in addition to the developmental assessment, cover vision and hearing and take into account social and emotional factors.

At the end of the year, 85 of the county's 136 clinics were carrying out developmental screening examinations, and it is hoped that by the end of 1971 it will be possible to introduce them to the remaining clinics.

Over 10,500 screening examinations have been carried out during the year, and the medical officers making the examinations have been asked to complete a return which indicates whether the doctor considers the various parts of the examination to be satisfactory, unsatisfactory or doubtful. The parts of the examination on which they are asked to comment are physical measurement, observation, physical examination, tendon reflexes, responses and developmental examination. Analysis of the results shows that 4.1% were considered to be "unsatisfactory" in one or more category, and that 9.7% were shown as "doubtful" in one or more category.

Two post-graduate courses of training for clinic medical officers undertaking developmental examinations were held and 41 doctors attended. One of the courses was organised, as previously, in association with the University of Manchester and for the first time a similar course was organised in association with the University of Liverpool at Clatterbridge Hospital. Both courses were of five days' duration and were based on the syllabus used in 1969; they were approved courses for purposes of seniority, etc.

The department is most grateful for the assistance given by Professor John Davies and his colleagues at Manchester University and by Professor John Hay and his colleagues at Liverpool University in the organisation of the courses.

In-service training was also arranged for health visitors to acquaint them with the procedures to be adopted in the new-style clinics.

It was intended that the present child health programme should run for a period of two years, ending December 1971, so towards the end of the year a working party was formed under the chairmanship of the Deputy County Medical Officer of Health to examine the whole structure of child health care and to determine what changes would be desirable in the new programme.

Genetic Counselling Service

In co-operation with the department of medical genetics, University of Manchester, the county council has commenced a genetic counselling service in east Cheshire. The service has been run on an experimental basis in the borough of Macclesfield since March 1970 under the clinical direction of Dr. Rodney Harris, reader in medical genetics at the university. The object of genetic counselling is to give accurate information in terms suited to the educational level and experience of the patient. The effect of skilled counselling is to remove fear and uncertainty and to substitute an informed appreciation of the real risks of, for example, the birth of a second malformed child. In all cases the risk is clearly stated, but it remains the

individual decision of the parents whether to accept the risk or not. This decision must be their own, and it is not part of the service to offer unwanted advice as distinct from relevant information.

It has been estimated that 5%—6% of live-born children will show at birth, or develop in later life, a malformation or disease with an important genetic component, and that at least 1% of all infants have a major chromosome abnormality.

The general public is becoming more aware of this due to information via the mass media and it is expected that in the near future public demand will make it essential to provide a comprehensive counselling service, readily available at local level.

The clinics are held in Macclesfield at monthly intervals, 8 sessions having been held in the period ending December 1970.

Nineteen patients have been seen and there have been 7 follow-up attendances.

Accurate diagnosis is the key to genetic counselling, and a great deal of research has to be carried out before counselling can be given. To this end a health visitor has been trained as a field worker, initially by attending sessions at Manchester Royal Infirmary and working with Dr. Harris's own field worker, and subsequently by working under the direct supervision of Dr. Harris. Her work consists of taking accurate and detailed family histories and drawing up a family tree for each case. She also has to trace all relevant medical notes, test results and even in some cases collect family photographs. The field worker also arranges and attends the counselling sessions and then follows up the cases and makes arrangements for chromosome, haematological, dermatoglyphic and other biological investigations.

Listed below are the diagnoses of patients who have received genetic counselling.

Microcephaly + multiple congenital abnormalities	...	...	1
Mongol	...	...	6
Hare lip	...	...	1
Spina bifida + hydrocephalus	...	...	2
Benign intra-cranial hypertension	...	...	1
Anencephaly	...	...	3
Muscular dystrophy	...	...	1
De Lange syndrome	...	...	1
Multiple congenital abnormalities	...	...	1
Ectodermal hypoplasia	...	...	1
Encephalocoele hydrocephalus + multiple congenital abnormalities	...	...	1
			<hr/> 19

The clinics also serve a very valuable educational function in that general practitioners and county health department M.O.s are invited to attend.

Screening for the early detection of Phenylketonuria

Phenylketonuria is a hereditary disease in which metabolism of the amino-acid, phenylalanine, is abnormal. Infants affected are unable to utilise phenylalanine and they accumulate phenylpyruvic acid which is excreted in the urine. Left untreated, infants with phenylketonuria develop mental retardation. However, if the disease is detected at an early age, a phenylalanine-free diet may be introduced which is highly successful in controlling the disease.

Since screening began in the county the health visiting staff have been using the Phenistix test. In October 1968 a circular was received from the then Ministry of



NESTON CLINIC CENTRE

Play Area

Health on the results of a panel of the working party of the Medical Research Council on phenylketonuria, set up to study different mass screening methods for the early detection of phenylketonuria. The report recommended that Phenistix testing for phenylketonuria should be replaced by the Guthrie Test, as this was the test least likely to fail to detect phenylketonuria in an affected newborn infant, thus enabling dietary treatment to start as early as possible.

The Guthrie test is now being carried out in the area of the county administered by the Liverpool Regional Hospital Board, and during 1970 a total of 5,307 babies were tested. In one instance the blood test was high enough to warrant immediate further investigation and the child was admitted to Alder Hey Hospital.

Later in the year a meeting was held with representatives of Manchester Children's Hospital to discuss the introduction of the Scliver Test (another type of blood test) in the area of the county administered by the Manchester Regional Hospital Board and it was expected that screening would begin early in 1971.

County Day Nurseries

The county council provides 13 day nurseries in various parts of the county which accommodate 475 children aged under 5 years. Most of these children are from the priority categories of attendance for day care, i.e. the children of one-parent families, low income families with working wives. Handicapped children are also a priority group and it has been noted that more physically and mentally handicapped children are being accepted into the nursery environment.

In view of the increasing demand made upon the day nursery staff, it has become essential that more qualified staff are needed, and as vacancies have arisen, emphasis has been placed on recruiting experienced and certificated nursery nurses.

A refresher course for senior day nursery staff was held for four days and 15 members of staff attended.

Twelve of the county day nurseries provide practical experience for students studying for the N.N.E.B. certificate. The county's fourteenth day nursery is now being built at Partington, this being an area of special social need as defined by the D.H. and S.S. The day nursery is now almost complete and should be operating by the summer of 1971, providing accommodation for 50 children.

Registered Nurseries, Playgroups and Childminders

The number of applications under the Nurseries and Child Minders Act 1948 has continued to increase and there are now over 520 registrations.

In order to obtain more detailed information on the facilities available in the county, a questionnaire was sent to all registered groups. A total of 65% completed the questionnaire and it was found that over 12,000 children were benefiting from some form of playgroup experience. Furthermore over 60% of the people in charge of the children were suitably qualified.

The county council's further education department, in association with the health department, organised a "pre-school playgroups course" at six colleges. The duration of the course is 24 evening sessions, and includes talks on management and organisation within the playgroup, child development and playgroup activities; over 200 people enrolled for the courses. As the courses are still in progress it is premature to make an evaluation at this stage.

Most playgroups operate mornings only and are accommodated in rented premises, i.e. church halls, tennis and cricket club pavilions, scout and guide huts and private houses.

It is hoped in the near future to sponsor children from socially deprived homes to enable them to attend private playgroups and also to make direct grants enabling playgroups to be established in areas of special need.

Local Government Grants (Social Need) Act 1969 Urban Programme Grant, Phase 3

Under the terms of the above programme the Government have approved certain areas where financial assistance may be given for the benefit of priority children in need of day care. Altrincham, Crewe, Hyde and Macclesfield have been selected as areas of special need and it is hoped that a scheme will be implemented in the near future.

Care of the Unsupported Mother

MOTHER AND BABY HOME

The mother and baby home continued to function throughout the year and a total number of 55 girls were admitted. Although the home can accommodate 20 girls the average occupancy was 12 and the average length of stay 67 days. It would appear that there is a decreasing demand for this type of accommodation, and that this is reflected by the number of unsupported mothers for whom the authority has accepted financial responsibility; in 1968 it was 114, in 1969 83, but the number dropped to 59 in 1970. It is also significant that the majority of girls for whom assistance was requested were under the age of 18 years.

It would seem that changing social attitudes are partly responsible for the decline in the demand for admission to mother and baby homes, as the overall illegitimacy rate does not show a comparable decrease. An increasing number of unmarried mothers are keeping their babies, and it is becoming more evident that additional provision should be made to enable them to earn a living and care for their children. Suitable accommodation for mother and child and adequate day care for the child is essential. Some attempts have been made by voluntary bodies to provide sheltered accommodation, but the amount available is insufficient.

THE FATE OF ILLEGITIMATE CHILDREN

The fact-finding investigation which was commenced in 1968 to try to ascertain the fate of illegitimate children has continued. 557 of the illegitimate births in 1970 were investigated, and Table II compares the results of such investigations with the results of the investigations of those born during 1968 and 1969.

Table I—Children born in 1968*

	At 1 month (1968 enquiry)	At 12 months (1969 enquiry)	At 24 months (1970 enquiry)
Living with mother:			
(i) only	80	44	35
(ii) now married (not to father)	—	40	26
(iii) now married to father ...	—	48	73
Living with mother and putative father	98	71	44
Living with mother & grandparents	292	204	235
Living with grandparents only ...	—	1	10
Babies adopted	—	21	27
Deaths	—	2	3
Left area	—	52	25

* Excluding those originally found to have been adopted, etc.

	At 1 month (1968 enquiry)	At 12 months (1969 enquiry)	At 24 months (1970 enquiry)
Not recorded	13	—	—
Taken into local authority care ...	—	—	3
Living with putative father only ...	—	—	2
Totals ...	483	483	483

Table II—Children born in 1968, 1969 and 1970

Result of first investigation	Born 1968 (1968 enquiry)	Born 1969 (1969 enquiry)	Born 1970 (1970 enquiry)
(a) Number living with mothers ...	80	108	97
(b) Living with mother & putative father	98	61	63
(c) Number living with mother and grandparents	292	306	260
(d) Number of adoptions	222	115	105
(e) Number taken into care of local authority	10	6	5
(f) Number stillborn	6	2	2
(g) Number died	4	8	10
(h) Number left County Council area	21	14	15
Total ...	733	620	557

Dental Service

There has been a further increase in the demand for dental treatment for both pre-school children and expectant and nursing mothers during the past year. The attendances for treatment have increased by 22% and it is likely that the demand will continue to rise in the future. In addition, more patients are returning for routine examination at regular intervals.

This trend is welcome and in accordance with advice given by all dental authorities, but it will result in grave problems. At the present time the dental services are saved from chaos by the large gap between the need for treatment and the actual demand from patients. Although regular dental care is generally accepted as being necessary from the age of about three years, the resources to provide such care are not available and are not likely to be provided within the foreseeable future. It is doubtful whether the present services are capable of satisfying a major increase in demand.

Under these circumstances conservative treatment is usually provided only for the relatively small number of pre-school children whose parents are anxious for it to be done and who are likely to continue to co-operate. The prevention of dental caries by fluoridation of water supplies would make a radical difference to this age group and it is hoped that they will not be denied the benefits of this established public health measure for much longer.

The maintenance of dental health depends on habits of diet and oral hygiene which are established at an early age. Whenever possible the opportunity is taken to talk to groups of mothers especially at the ante-natal clinic so that they can encourage correct habits in their children long before they are likely to require dental treatment. Dental health has been included as an important part of the health education training courses run for health visitors.

NURSING SERVICES

NURSING SERVICES

Work Study

In order to plan the future development of the community nursing services it was felt necessary to obtain precise information about the work patterns of existing staff. A survey of their work took place over a period of seven days in June and all nurses on duty at any time during that period completed survey forms designed by the research section. Each nurse accounted for every minute of time connected with her official duties, whether during working hours or not. The research section reported that both the degree of co-operation and the high standard of accuracy with which the forms were completed were exceptional and this made the survey very reliable. In addition to giving a detailed picture of the pattern of nursing carried out in the county, consideration was given to geographical variations and whether or not nurses were working attached to general practices. The survey produced a number of interesting points. For instance, it was found that health visitors spent 23.7% of their working week on clerical procedures and that for clinic nurses the figure was 22.7%. Much of this work could be done by clerks thus relieving trained nurses' time for duties more appropriate to their skills. Similarly district nurses spend one-fifth of their nursing time on unskilled or relatively unskilled work. No pattern emerged from variations of work arising from geographical differences, but there was a marked increase in work resulting from attachment to general practices suggesting that closer communications between nurses and doctors greatly improved the service to the patient. The information provided by the survey proved invaluable in compiling a report on the future structure of the Cheshire county nursing service which will be presented to the county health committee early in 1971.

Attachment of Nursing Staff to General Practitioners

It will be recalled that this scheme, approved by the county health committee in 1968, recommended that health visitors, district nurses and district midwives should be attached to medical practices. These nursing teams will carry out their present duties, but their patients will be those on the lists of the practices to which they are attached, instead of within stipulated geographical areas. Attachment not only benefits the patient, who is provided with a comprehensive service from a unified team, but reduces problems of communication within the team.

Attachment schemes to date are confined within the boundaries of the administrative county. Problems present themselves in peripheral areas, e.g. many doctors in Sale have patients on their lists who are resident within the administrative area of the city of Manchester. No arrangements have so far been made with neighbouring authorities for nursing staff to cross the county boundary, though in some cases nurses have been attached to practices whose main surgeries are outside Cheshire, but have branch surgeries and substantial numbers of patients within the county. It will clearly be necessary to have discussions with other authorities to resolve these matters.

During 1970 attachments were made to 72 practices in Bebington, Eastham, Northwich, Weaverham, Barnton, Davenham, Winsford, Middlewich, Malpas, Partington, Sale, Bredbury, Romiley, Ellesmere Port, Great Sutton, Runcorn, Frodsham, Helsby, Wilmslow, Handforth, Alderley Edge, Hoylake, West Kirby, Macclesfield, Bollington and Chelford and it is expected that attachments will be completed during 1971.

The following table illustrates the progress of the scheme up to 31st December, 1970:

	Population	Attachment of Nursing Staff		
		Practices	Doctors	Nursing Staff
1969	252,000	32	101	102
1970	459,300	72	189	206
Total	711,300	104	290	308

Health Centres

Where a health centre is opened facilities are available for all nursing staff to be based at the centre, whereas with a clinic, only health visitors and clinic nurses have a base there, and the district nurses and midwives are required to work from their own homes. The fact that general practitioners and all nursing staff are working from the same premises makes it easier for them to consult in their work, and this is what makes attachment flourish. An additional advantage is that facilities are available for nursing staff to hold clinics and sessions alongside their medical colleagues.

Child Health Clinics

The role of the health visitor in the child health clinic has always been an important one, and this role and that of the clinic nurse have been extended by the introduction of paediatric screening. Health visitors and clinic nurses have received special in-service training in this field.

Mothers are now bringing their children to clinics, by appointment, for medical examination, and at this time the health visitor is available to give advice. Some time is still set aside at each clinic for those mothers who wish to see the doctor or health visitor, but who are not attending with their children for specific examinations.

Training

The service has been without a district nurse tutor during the whole of the year. As a result of this it was necessary to second district nurses to courses run by neighbouring authorities for their theoretical training. Their practical training, however, was given in Cheshire. In 1970, 8 state registered nurses and 3 state enrolled nurses successfully completed their courses.

We have continued to give 3 months' district experience to pupil midwives during the second part of their midwifery training and this facility was extended to 39 midwifery students in 1970.

Seventeen health visitor students who completed their training in the autumn of 1970 are now employed by the county as full-time health visitors. A further 17 health visitor students are at present undertaking training under the sponsorship of the county council and will complete their training in the autumn of 1971, and, in addition, 8 students, 4 of whom are taking the bachelor of nursing course at Manchester University, are receiving field work instruction.

A planned programme of in-service training was followed during the year. This involved, in the case of district nurses, instruction by physiotherapists in hospitals who kindly arranged study days on the subject of rehabilitation. Similarly, midwives and health visitors joined with obstetric physiotherapists for in-service training in connection with parentcraft teaching.

Maternity Services

The present national state of the midwifery services is unsettled and unsatisfactory, and this is acknowledged in the report of the sub-committee (headed by Sir John Peel), of the standing maternity and midwifery advisory committee on the subject of domiciliary midwifery and maternity bed needs. In this report recommendations were made for a unified maternity service. It envisages a one hundred per cent hospital delivery and medical and midwifery care provided by consultants, general practitioners and midwives working as teams. The unification of the maternity services implies the employment of all midwives by a single authority directly responsible for all midwifery services. The report stresses the importance of continuity of patient care and as a first step towards this goal discussions have been held with several hospital management committees to see if domiciliary midwives should undertake delivery of their patients in general practitioner maternity units.

Parentcraft

An investigation into parentcraft teaching throughout the county led to a re-organisation of this service and classes are now planned by a team of three: a health visitor, a midwife and a physiotherapist. In order to ensure that each member of the team understood and appreciated the roles of the other two, a combined in-service training course was held.

Management

The report of the working party on management structure in the local authority nursing services, under the chairmanship of E. K. Mayston, published in October 1969, was followed by Department of Health and Social Security circular 13/70 which asks local authorities to re-examine their existing nursing staff structure as a matter of urgency in the light of the working party's recommendations. The principal recommendation of the report is that there should be three levels of management—top, middle and first line—and that these should be strictly related to need. The structure in Cheshire was examined accordingly with a view to submitting a report to the county health committee early in 1971.

Registration of Homes

The department was responsible for the registration of private nursing homes under the Public Health Act 1936, and the registration under the National Assistance Act 1948 of private old people's homes and private disabled persons' homes.

At the end of 1970 the position was as follows:

	New Home opened during 1970	Homes closed during 1970	No. of Homes at 31.12.70	Total beds available at 31.12.70
Nursing Homes	1	—	15	255
Old People's Homes and Disabled Persons' Homes	1	3	38	1,184

One of the nursing homes included above is registered under the Abortions Act 1967, and 85 abortions were carried out during the year. This shows an increase of 44 over the previous year. In addition to the nursing homes included in the above table, a 400-bed private psychiatric hospital is registered, in accordance with the Mental Health Act 1959, as a mental nursing home. The figures for disabled persons' homes include one establishment for mentally subnormal children.

Registered homes are subject to regular visits by members of the medical staff of the department and when necessary by the county public health inspector. The fire department also makes regular inspections to ensure that adequate fire prevention measures are taken.

Requests for advice from people wishing to adapt property for use as nursing homes, old people's homes or disabled persons' homes are not infrequent, and it is apparent from many of them that little is known of the standards of accommodation required.

MENTAL HEALTH

MENTAL HEALTH

Council house scheme for the mentally ill

Emphasis on community care of the mentally disordered is one of the main themes running through the Mental Health Act of 1959 and it is therefore particularly satisfying when a project of the council's mental health service finally comes into being which demonstrates community care at a really practical level.

In October 1970 the first house under the council's council house scheme for the community care of the long-term mentally ill in hospital came into operation.

The scheme was designed to provide accommodation in the community for those hospital patients who, although recovered to the point where they could leave hospital, no longer requiring hospital treatment, had no home to return to, or whose home was totally unsuitable for their reception and for whom it had proved impossible to acquire lodgings. Under the scheme the council rents council houses from housing authorities within the vicinity of the two big psychiatric hospitals in Cheshire, i.e. the West Cheshire Hospital and Parkside Hospital, Macclesfield. It is important for the council houses to be close to the hospital, so that residents in the council house not in gainful employment may easily attend the hospital industrial therapy unit and thus follow a full day's work.

In the summer of 1970 the Macclesfield Rural District Council offered a house in Poynton. It proved very satisfactory, and was therefore rented from the Rural District Council, some redecoration took place, and the house was fully furnished by the County Council to receive four hospital patients.

As the Poynton council house was the first house to be obtained under the scheme, it was considered advisable to start with female residents, and four female Cheshire patients were selected at Parkside Hospital by the consultant psychiatrist, Dr. Aitken, Dr. Blyth, principal medical officer mental health and Mr. Brown, the area mental welfare officer for the Macclesfield area.

Since October, 1970, the four patients from Parkside Hospital have resided in the council house, they each have a job to go to, fitting into the local community very satisfactorily and receive frequent visits from the mental welfare officer in case any problems arise which require attention. Each resident pays £2.50 per week to the county council, which covers rent, rates, heat, light and television rental. The purchase of food and its cooking are done by the residents themselves; this arrangement works very well indeed and is one which meets with their complete approval.

The council house scheme for the long-term care of suitable hospital patients makes provision for 22 council houses to be in operation by the end of 1973, 11 serving the West Cheshire Hospital, near Chester, and 11 serving Parkside Hospital, Macclesfield, and together giving accommodation to 110 hospital patients both male and female.

Although Macclesfield Rural District Council and Chester Rural District Council both gave their enthusiastic support to the scheme and were most helpful, it proved to be a slower process than expected to obtain vacant available council houses. Hence it was October 1970 before the first one was rented in the Macclesfield area, and the first house in the Chester area will be available early in the following year. Undoubtedly the proven success of the first house will go a long way to helping the council to obtain further council houses and achieve their target figure by the end of 1973.

Hostels for the mentally ill

Rehabilitation hostels for the mentally ill continue to play an ever-increasing part in the mental health service for the county. These hostels are an essential part of the therapy for many of the young and middle-aged who are admitted for treatment to a psychiatric hospital. For many of these patients, a point is reached in their recovery where the hospital can do no more for the patient and yet the patient is not sufficiently adequate to return to his former life. At this point a period of time, approximately 12 months, in a rehabilitation hostel takes the patient beyond the recovery point reached by the hospital and enables him to lead an independent life; this final stage of recovery is achieved by the patient while living in a therapeutic sheltered community, being able to follow gainful employment and attempt full social integration while still retaining the "safety" of the hostel during the testing period.

During 1970 the two rehabilitation hostels used by the Council were The Towers, Kilmorey Park, Chester, a hostel run by the Richmond Fellowship organisation, which has 15 hostels in this country and has recently set up hostels in the United States of America, and the Chapel Hey Hostel, run by the Wallasey County Borough and situated in Moreton, Wirral.

The proximity of these two hostels to the main hospitals which they serve, West Cheshire and St. Catherine's, Birkenhead, is most fortunate because it means that patients selected for rehabilitation live in an area with which they are familiar and hence problems of adjustment to a totally new environment are not encountered.

A small number of Cheshire patients from Parkside Hospital, Macclesfield, are sponsored at The Towers, but of course the problem of the distance of the patient from his home environment is present and it is felt that rehabilitation facilities specifically for Parkside Hospital would be beneficial.

Representatives of the Richmond Fellowship organisation have discussed the matter with the Health Department and have accepted in principle the need for such a hostel. It was decided that the Sale/Altrincham area was the position of choice for two reasons, i.e. (1) many patients in Parkside Hospital are from the Sale/Altrincham area; (2) the opportunities for patients living in a hostel to obtain gainful employment in this area are very good.

The council have agreed to lend the Richmond Fellowship the capital necessary to purchase a suitable property and to give a grant towards the equipment and furniture. At the present time the Richmond Fellowship headquarters do not wish to extend their mortgage commitments. However, as soon as the Fellowship is in a position to take on further mortgage commitments it will purchase a suitable property in the Sale/Altrincham area. In the meantime patients from Parkside Hospital will continue to receive rehabilitation facilities at the existing hostels. In these hostels patients pay a contribution from their income, whether from gainful employment, social security or sickness benefit. The contribution is in accordance with the national scale and the county council pays the balance of cost of their financial maintenance. During 1970, 20 patients were received into rehabilitation hostels.

Hostels for the subnormal

In May 1970 the second county council hostel for severely subnormal children was completed, and children suffering from severe subnormality who could not be looked after at home were admitted. The plan of the Neston hostel is the same as for the Crewe hostel for severely subnormal children, which was the first county hostel to be opened. Each hostel caters for 20 severely subnormal children of both sexes and in the age range of 2 to 16 years.

The demand for hostel vacancies is heavy and when Crewe hostel was opened it was decided to retain one female bed and one male bed for periodic short-term care for severely subnormal children whose parents required relief from the stresses upon them caused by caring for a severely subnormal child.

The scheme is called the rotating short-term care scheme and under it a child has successive periods of two weeks in hostel and eight weeks at home. Thus two beds can give a much appreciated service to ten families, who in most cases would press for and require permanent care for their child if the relief of the rotating short-term care scheme was not available. So successful did the scheme prove at Crewe that at Neston it was decided that two male and two female beds should be reserved for rotating short-term care, and thus 20 families will benefit from the four beds. At present all the ten male rotating short-term care places are allocated and 7 of the 10 female places, leaving 3 female vacancies under the scheme.

Many parents have expressed their appreciation of the scheme by letter and by personal calls to the health department. In these two hostels all permanent care beds for children in the age range 5 to 16 years are occupied and there is a waiting list. There are 3 vacancies in each hostel for severely subnormal children of ages 2 to 5 years.

Hostel vacancies for adult subnormals within the county are provided by the William Gibson Hostel at Wrenbury (40 male vacancies), The Willows Hostel at Macclesfield (21 female places) and Staley House at Stalybridge (16 male and 9 female vacancies). The construction of 3 new hostels situated at Ellesmere Port, Sale and Northwich commenced during 1970 and these 25-bedded hostels for both female and male subnormals will be completed and in operation by the late spring of 1971. At present there are no vacancies available for subnormal adults in county hostels, but when the 3 new hostels come into operation the present waiting list can be absorbed and it is planned to start the rotating short-term care scheme at each, so that many more families may get relief and benefit than if all the beds were allocated on a permanent basis.

Training Centres

During 1970, 2 new junior training centres came into operation, one at Altrincham and one at Neston. The centres are of a similar plan and each caters for 90 children. During the last 10 years much has been learnt regarding the most suitable type of buildings needed for the training and education of the severely subnormal child and this concentration of specialised knowledge is contained in the building note issued by the Ministry. The two new centres were designed with the recommendations of the building note in mind, with the result that the buildings are of exceptional quality and are planned so that the needs of the severely subnormal child are catered for as completely as possible.

The county is now served by 7 purpose-built junior training centres situated at Eastham, Neston, Crewe, Macclesfield, Northwich, Altrincham and Hyde. The old building in Navigation Road, Altrincham, is no longer required and has ceased to provide training centre facilities. The overcrowding at Eastham Junior Training Centre is now eased, as the new Neston Junior Training Centre receives children from the Deeside of the Wirral who previously attended the Eastham centre. The two new centres make provision for the education and training of mentally handicapped children in the age range of 2 to 5 years. The original plans for the centres at Eastham, Crewe, Northwich, Macclesfield and Hyde did not make this provision, and so additional units were built at each centre, with the exception of Hyde, to cater for 20 children of age range 2 to 5 years. The new unit at Eastham opened in July 1970, the units at Crewe and Macclesfield opened in October 1970

and Northwich was due to open early the following year. In the Hyde area facilities for education and training of the under-5 mentally handicapped child are provided most successfully at Glengarth, Marple, a unit run by the North-East Cheshire Society for Mentally Handicapped Children and used by the county council on an agency basis, thus a unit at Hyde junior training centre was not required. In the Altrincham area training facilities for the under-5 severely sub-normal child have for many years been provided by The Rowans Centre run by the Sale and Altrincham Society for Mentally Handicapped Children, and thus children in this area have for many years enjoyed and benefited from the early training which is now becoming available in the entire county. The new Altrincham junior training centre of course has facilities for the education of the 2 to 5 year old, but it was decided that it would be most inadvisable to transfer all the children from The Rowans to the new centre, as such a move would have completely filled the new centre and prevented any further admissions in the immediate future, also closure of The Rowans would not be in the best interests of mentally handicapped children, considering the great contribution that this centre has always made in the field of mental handicap. The Health Department in conjunction with the chairman and committee of The Rowans agreed that mentally handicapped children in the Altrincham area should receive training in The Rowans up to the age of 4 years and should then transfer to the new centre. This arrangement works very well and has the merit of providing vacancies at both establishments.

The new 2-5 units are proving of great value in the training and education of the mentally handicapped child. All these young children require professional help to achieve the skills which the average child acquires by the day to day contact with his family. The long-term effect will be that the 5-year-old will have reached a higher level of development on entering the infant class in the training centre than he would have done if he had not received the benefit of education at the early stage. The benefit of early education will be reflected in the child's achievements throughout the whole of his training centre career.

Adult training centre facilities for the mentally handicapped in the county are provided at Ellesmere Port, Crewe, Northwich, Macclesfield, Altrincham and Hyde. Although each adult training centre has attendances ranging from 60 to 70 trainees there are vacancies available, and all the mentally handicapped in the county who require a training centre place are able to obtain it. During 1970 plans were laid to build extensions to the existing adult training centres so that over the next few years additional vacancies would continue to be available as these came to be required. These extensions will accommodate between 30 and 40 trainees, depending upon the nature of the machinery and equipment which is put into the extensions.

The demand for adult training centre vacancies in the Wirral has always been higher than in any other part of the county, with the result that Ellesmere Port adult training centre has been operating at maximum capacity for approximately 18 months. This position was anticipated some years ago, and during 1970 work was completed on the new adult training centre at Heswall. This training centre, opening in January 1971, will take the trainees from the Deeside of the Wirral who at present attend Ellesmere Port training centre.

As with Neston and Altrincham junior training centres the new Heswall Adult Training Centre in its plan and structure incorporates the experience of many years in training centre function, and the result is most pleasing.

Trainees in factory work

Last year we were able to place groups of trainees from adult training centres into factories with their instructor. These trainees were people who had never

worked in gainful employment and had never been part of a work force outside the protected environment of an adult training centre. This was regarded as a big step forward in the effort to bring the mentally handicapped adult to his optimum level of functioning and to realise his true potential. Clearly this scheme must progress and be expanded, and in 1970 it was possible to place more groups of trainees from adult training centres into factories. Two examples of the factory work now undertaken by groups from adult training centres are:

- (a) filling ink bottles, heat-sealing and packaging for a firm whose factory is situated at Holmes Chapel; the output from the factory group of trainees was 60,000 per week and the amount earned was £120 per week;
- (b) unloading from lorries, re-boxing and stacking of cheeses for a firm in Crewe; this factory is very near to the adult training centre and is proving a useful stage in the process of enabling a trainee to obtain a job in the community completely independent of the training centre.

Mental Welfare Officers

The Mental Welfare Officer Service in the county has continued to provide a personal service of advice and support for the mentally disordered in the community in the field of mental illness and mental subnormality, also to carry out duties in respect of the admission of patients into hospital either informally or compulsorily as circumstances require.

The emphasis is now firmly placed on attempting, whenever possible, to maintain mentally disordered persons in the community, either in their own homes or in situations as near to their home conditions as possible. The psychiatric hospitals are adapting more to the requirements of short-term in-patient treatment and supportive out-patient treatment, using the mental welfare officers in this supportive role.

All this necessitates close liaison and understanding between all parties involved, the patients and their families, general practitioners, consultant psychiatrists, hospital staffs and community workers. The mental welfare officer is often the client's link with the familiar and the unknown, a buffer between a client and sometimes a rejecting world. The degree of success in community life achieved by the patient with long-term disabilities must depend partly on the willingness of the general public to tolerate in their midst some people with mild abnormalities of behaviour or appearance. Local authorities have a major role to play in changing public attitudes to mental disorder if the Mental Health Act of 1959 is to be wholly effective, and the mental welfare officers have made a valuable contribution in giving talks to outside bodies and voluntary organisations in an effort to achieve this goal. They have given talks to schools, stimulated projects, and arranged visits to county council establishments such as junior and adult training centres, and day centres for the elderly mentally infirm, encouraging volunteers and clients' families and friends to participate in social clubs set up in each of the nine mental health areas for ex-mentally ill patients and for the subnormal.

Staffing

During the year, four mental welfare officers left the service. Mr. W. Day (Crewe) went to undertake further training, Mr. P. J. Huxley (Stalybridge) transferred to the Child Guidance Service prior to further training as a psychiatric social worker, Miss M. J. Cross (Northwich) took up another post as a social worker in Scotland, Mrs. A. E. Gulhati (Hazel Grove) left to take up a post as a medical social worker at the Manchester Royal Infirmary, and Mrs. P. M. Tomkins (Bebington) resigned for domestic reasons. Their devotion and valued work during

their employment in the Cheshire County Council mental health service is appreciated.

Recruitment of trainee mental welfare officers as replacements has been good.

Training

Twelve mental welfare officers are away on full-time training courses at the present time, eight of them will return to duty duly qualified in July 1971. All nine area mental welfare officers and their qualified staff are involved in student training and in supervising students from colleges of further education and universities.

Liaison

The mental welfare officers have established good liaison with the medical and related social services. They attend case conferences and out-patient clinics, and provide full social histories of the cases when the consultant psychiatrists request them. They also maintain links with the patient and his family whilst he is in hospital. Close liaison is also maintained with other departments of the county council when a patient's property is involved and no relative or friend is able or willing to protect it. The role of the mental welfare officer in the community is one which is constantly growing in volume and importance as the demands made on the individual in the community tend to become more and more complex.

In May 1970 the Local Authority Social Service Act was passed. This Act followed the recommendations of the Seebohm Committee which was set up by the Government with the purpose of investigating how the social service needs of the community were being met, and how the services could be improved and expanded.

The Act laid a duty on every local authority to establish a social service committee with the function of providing services which in the past have been the responsibility of the children's committee, the welfare committee and the health committee. In order that this new committee might carry out its functions, a new social service department was to be formed under a director of social services.

1970 saw the early preparations for the formation of this new department under which the present mental health service would come. Much of its future success will depend on the thoroughness and care of the early preparation for its formation, and in order that the nature, size and variety of the problems which have faced the council's mental health service in the past may be known and appreciated by those responsible for forming the new department, many meetings and discussions have taken place and have proved most beneficial and instructive.

**PHYSICALLY
HANDICAPPED**

PHYSICALLY HANDICAPPED

General Classes

In April 1970 a comprehensive review of the services provided in Cheshire for handicapped persons — including the blind, the partially sighted and the deaf — was submitted in report form to the health committee. The findings of the survey of handicapped persons in the 16-59 age group conducted in Macclesfield during 1969, and to which reference was made in last year's report, served as a yardstick in estimating the extent of the provision of both staff and material resources required to bring the services provided for handicapped persons into line with other county services. It was advocated that over a period of four years, increases should be made as follows:

- Staff — Social Workers—at date of report 1, increasing to 15.
Occupational Therapists—at date of report the equivalent of 9.9 full-time, increasing to 23.
- Resources — Purpose-built Handicapped Persons Units—from nil to 8.
Handicapped Persons' vehicles (with hydraulic lift)—from 5 to 15.

The provision of services for the physically handicapped will be the responsibility of the social services department with effect from 1st April, 1971. It is hoped that the review presented to the health committee will be of value to the social services committee, and that the implementation of its recommendations will do much to aid the future development of the services for handicapped persons.

In September, the first purpose-built handicapped persons unit at Watling Street, Northwich, was opened and two further purpose-built units, at Bebington and at Crewe, will be ready for use in the spring of 1971. The unit at Crewe is the first to be built in isolation, not as part of a large complex.

Club facilities for handicapped persons are available in all 15 health divisions, and some of the clubs organise both social and handicrafts sessions, either together or separately. In Mid-Cheshire all existing facilities for handicapped persons were transferred to the new purpose-built handicapped persons unit. The unit, in the charge of a full-time occupational therapist, is open for two full days each week, and persons attending are able to partake of a mid-day meal on the premises and to take part in industrial work sessions, handicrafts classes and social sessions. In addition sessions are available for the blind and for the mentally ill. Divisions are assisted in the running of their clubs by the Women's Royal Voluntary Services throughout the county and we are greatly indebted to this organisation for their invaluable help. Last year it was reported that Pontin's holiday camp at Blackpool had been placed at the disposal of the Red Cross Society for one week in October to provide a holiday for the physically handicapped at minimum cost. More than 100 men and women from Cheshire availed themselves of this opportunity. The county's five special vehicles for the handicapped were used for the transport of wheelchair cases and the holiday proved to be so successful that it is to be repeated in 1971.

The number of adaptations to property for handicapped persons and the provision on loan of aids to daily living continue to increase, and additionally notifications of persons requiring adaptations for the purpose of the installation of artificial kidney machines totalled five during the year. Useful discussions were held over a considerable period during the year with representatives of the Liverpool Regional Hospital Board with a view to establishing a better referral of substantially and permanently handicapped persons who might require local authority services after discharge from hospital. A procedure has been devised and is awaiting

implementation. The scheme in its original conception was intended to apply to paraplegics, but during the course of discussions it was realised that it was equally applicable to all long-term disabled persons.

The county welfare department in consultation with the county health department, has included in its building programme for 1971-72 a 36-bedded hostel for the younger physically handicapped. The project will be financed jointly with the Chester City Council and 24 beds will be allocated to the county and 12 to the city. The intention would be to give preference of admission to the younger physically handicapped and to avoid the undesirable situations which occur from time to time whereby young chronically sick persons are accommodated in old people's homes and in the geriatric wards of general hospitals.

In the latter part of the year one additional social welfare officer for the physically handicapped was appointed, bringing the establishment to two, and an order was placed for an additional special vehicle, increasing the total provision to six.

The numbers of persons on the register of handicapped persons (general classes) were as follows at 31.12.70:

Major Handicaps	AGE					Total
	Under 16	16-29	30-49	50-64	65 or over	
Amputations	3	14	39	78	128	262
Arthritis or rheumatism	4	18	88	316	903	1329
Congenital malformations or deformities	172	104	51	21	35	383
Diseases of the digestive and genito-urinary systems, of the heart or circulatory system, of the respiratory system (other than tuberculosis) or of the skin	38	77	68	129	356	668
Injuries of the head, face, neck, thorax, abdomen, pelvis, or trunk; injuries or diseases (other than tuberculosis) of the upper and lower limbs and of the spine	25	50	66	84	168	393
Organic nervous diseases — epilepsy, disseminated sclerosis, poliomyelitis, hemiplegia, sciatica, etc.	117	222	317	392	441	1489
Neuroses, psychoses, and other nervous and mental disorders not included above	14	34	22	25	23	118
Tuberculosis (respiratory)	8	12	70	37	23	150
Tuberculosis (non-respiratory)	8	14	12	8	9	51
Diseases and injuries not specified above	46	40	21	27	134	268
Totals	435	585	754	1117	2220	5111

BLIND PERSONS

General

The existing arrangements continue whereby the council's approved scheme is implemented through the agencies of the Blind Welfare Societies at Chester, Ashton-under-Lyne and Macclesfield. The whole-time equivalent of 18½ social welfare officers for the blind (formerly known as home teachers for the blind) are employed by the three societies to give support to the blind and partially sighted and their families in the administrative county.

Incidence of Blindness

During the year 1970 there were 478 forms B.D.8 received for the county. These were classified as follows:

Registered as blind	...	...	...	...	...	...	278
Registered as partially sighted	...	...	...	...	...	...	117

Workshop Employees

There were thirteen blind persons so employed.

Home Workers

Augmentation in accordance with the national scheme was given by the council to all county approved workers, who numbered 10 at the end of 1970.

National Library for the Blind

Grant and augmentation were made in 1970 to the National Library for the Blind on behalf of two Cheshire home workers who are blind copyists for its northern branch, apart from the usual annual grant for general services, which are used by over 100 Cheshire residents.

Statistics

Number of registered blind persons in the county at 31st December, 1970:

Under five years	...	...	...	...	...	...	8
5—16 years	...	...	...	...	...	...	50
16—21 years	...	...	...	...	...	...	26
21—40 years	...	...	...	...	...	...	115
40—50 years	...	...	...	...	...	...	95
50—65 years	...	...	...	...	...	...	281
65—70 years	...	...	...	...	...	...	163
70 years and over	...	...	...	...	...	...	1233
Unknown age	...	...	...	...	...	...	—
Total							1971

Registered blind persons in county, aged over 16 years, employed or otherwise, at 31st December, 1970:

Employed—							
In workshops and workrooms	...	...	...	...	...	...	13
As home workers	...	...	...	...	...	...	10
Variously	...	...	...	...	...	...	115

Not employed—

Under 65 years of age	...	...	...	...	...	...	376
65 years of age and over	...	...	...	...	...	...	1388
Undergoing training	...	...	...	...	...	...	7

DEAF PERSONS

The county is fully covered by voluntary societies for the deaf, which act as agents for the county's authorised scheme. They comprise the Chester and North Wales Society for the Deaf, the Warrington and District Society for the Deaf, the Manchester Institute for the Deaf, and the Liverpool Deaf and Dumb Institute; some persons on the latter's list also receive services from the Liverpool St. Vincent de Paul Society (Roman Catholic).

The services provided include placing in employment, recreation both physical and mental (including social clubs, sports and holiday outings), spiritual care (using speech, signs and finger spelling) and general help in social adjustment and in relations with the various authorities.

A grant is also paid to the North Regional Association for the Deaf in respect of its statistical, co-ordinating, and educational work.

The registers kept by the societies of deaf persons are sub-divided on the following lines according to the person's present condition and needs rather than according to the origin of his disability.

Deaf with speech:

Those who (even with a hearing aid) have little or no useful hearing, but whose normal method of communicating is by speech and lip-reading.

Deaf without speech:

Those who have no useful hearing and whose normal method of communicating is by signs, fingers, spelling or writing.

The numbers of Cheshire persons on the registers of the societies at 31st December, 1970, were as follows:

			Under 16 years	Adult	Total
Deaf with speech	...	...	23	109	132
Deaf without speech	...	...	14	289	303
Hard of hearing	...	...	14	158	172

ENVIRONMENTAL HEALTH

ENVIRONMENTAL HEALTH

Comment

1970 has been a very active year in the public health section of the department.

The first detailed survey of all the schools in the county was completed, so that the education and architect's departments had received reports on the public health standard of all the county schools by the end of 1970. A summary of this survey is contained in the school health section of this report, and this discloses the large amount of work which is required to bring all the schools to a reasonable standard. Finance is the key here, and unless greatly increased funds are made available, it is difficult to see how the essential work on the schools can be carried out within a reasonable period. Indeed it seems that a phased programme of work is required covering a period of, say, five to ten years, by which time funds would be provided to bring the schools in each division up to standard. The statistics given in the report show the size of the problem in each division and it becomes plain that some divisions have a greater proportion of sub-standard schools than others.

The preparation of the code of practice on kitchen hygiene for use in all county premises, in collaboration with the schools meals section of the education department, was completed by the end of 1970, and printing is now in hand.

A code for the construction and equipment of county food premises is also in course of preparation jointly by the architect's, education and health departments.

A study on the use of frozen foods in county establishments, particularly the possibility of using pre-cooked frozen foods has also been undertaken, again in collaboration with the school meals section of the education department.

A working party has been set up to study the various problems of pollution (in its widest sense) in the Warrington New Town area, and the county public health officer is serving on this working party.

The liaison with the county planning department whereby the section gives comment and advice on the public health aspects of planning applications has continued to grow, and during 1970 more applications were dealt with than in any previous year.

The section also co-operated with the county architect's department in formulating a standard specification for the provision of learner swimming pools at primary schools.

The normal routine work of the section continued as in previous years and the following pages deal with the principal aspects of this. In the report on the work on the control of brucellosis, it is a little disquieting to note that more human cases (22) were reported than in recent years although the number of positive herds detected fell from previous years. It is hoped that the Ministry of Agriculture will push ahead with its compulsory area eradication policy, so that brucellosis may cease to be a problem in this country before many years are past. In this connection, however, one fears that Cheshire may be one of the last counties to be dealt with in this way.

Milk and Dairies

The work of ensuring that all milk produced, processed and sold within the county reaches the consumer in a clean and wholesome condition and free from disease-producing organisms was continued during 1970. All milk samples collected in connection with this work, as well as washed bottles for rinse examination, are

examined by the public health laboratory service of the Department of Health and Social Security, which provides the county council with a free service for these purposes. We are greatly indebted to the laboratory services for their co-operation.

The frequency of sampling and coverage is agreed with the directors of the two public health laboratories.

(a) **Milk Production**

Production is controlled by the Ministry of Agriculture, Fisheries and Food, but producers bottling milk not of their own production are licensed by the county council (see "distribution"), and a specific duty is also laid upon county councils by section 31 of the Food and Drugs Act 1955 to administer provisions designed to prevent the sale of diseased milk. The two principal diseases which milk may convey are tuberculosis and brucellosis.

This work is particularly important in view of the fact that there are 203 herds in the county from which milk is sold raw to the public. It is estimated that approximately 6,800 gallons of milk are sold each day under the designation untreated (raw) in the administrative county. This represents 7.2% of the population which is very much higher than the national average of 4% but perhaps more to the point it means that 77,700 persons are continually "at risk" in Cheshire from drinking raw milk.

- (i) Tuberculosis. During 1970, 512 samples were submitted for biological examination from 203 'raw milk herds'. In no case was tuberculosis infection detected.

Samples are submitted from each herd annually with the exception of smaller raw milk supplies (up to ten gallons per day) which are examined once in two years.

- (ii) Brucellosis. The department's extensive work in co-operation with the district council health departments continued in accordance with Ministry of Health Circular 17/66. The sampling frequencies and procedures evolved in 1967 proved highly satisfactory and were not changed, and details are given in a subsequent table.

During the course of the year 42 different herds were found to be brucella-infected in some degree. This is a considerable improvement on the 1969 figure when 53 herds were infected and generally the brucella figures are an improvement on the previous year.

Two important developments took place in 1970.

- (1) In March the Minister of Agriculture, Fisheries and Food announced as part of the annual price review that it had been decided to bring in a new "brucellosis incentive scheme" by which owners of registered brucellosis-free herds would receive a premium of 1½d. per gallon on milk, or an extra 37/6d. on the beef cow or hill cow subsidies. It was, however, disappointing that particular attention was not to be given to producer-retailers and that the new scheme placed the responsibility for the disposal for slaughter of reactors on the farmer. This system of disposal does present administrative difficulties.
- (2) The Agriculture Act 1970, section 106 (4), makes it an offence for any animal known to be a reactor to brucella abortus to be sold otherwise than for slaughter. Unfortunately the Act does not define reactor and does not specify an enforcing authority for this section.

It is accepted, however, that a cow found to be brucella culture or biological positive on milk test examination is a reactor within the meaning of this section.

It is expected that the Minister of Agriculture, Fisheries and Food will be making an announcement very shortly regarding compulsory area eradication, with a commencement date later in the year.

There can be little doubt that the pressure exerted by local health authorities and their associations has been a major factor behind these developments.

At the time of writing this report (March 1971) the situation in Cheshire with regard to the Ministry scheme was that of the 3,249 registered milk producers 224 were fully accredited. Included in these figures are the 199 producer/retailers of which 42 were fully accredited. These figures may be compared with those for 1969 when a total of 134 producers was fully accredited of which 28 were producer/retailers.

The human case register maintained in the department since May 1961 now stands at 194, 22 being reported during 1970.

Most of the recent cases, however, have been in farmers or their families, and not connected with the supply of raw milk to the public, which could mean that the measures being taken by the county and district authorities in Cheshire to protect the public from contracting brucellosis are being effective.

- (iii) Antibiotics in Milk. Antibiotics are widely used for the treatment of mastitis in cattle, and it is most undesirable that traces of antibiotics should be present in milk. Sampling for the detection of antibiotics in milk has therefore been continued during 1970. As the pasteurising dairies are carrying out periodic checks on their incoming farm milk supplies, the department has concentrated its attention on producer/retailer milks and other 'raw milk' supplies, using samples obtained for brucella and other examinations. A total of 1,889 samples was examined, of which three were reported as containing antibiotics. Appropriate action was taken in these cases including re-sampling. In no instance was the repeat sample unsatisfactory.

(b) Milk Processing

The county council is responsible for the important functions of licensing and supervising all milk pasteurising and sterilising plants in its 'food and drugs' area.

At the end of 1970 fourteen pasteurising establishments and one sterilising establishment were licensed. Both processes ensure destruction of all pathogenic organisms without any significant effect on the nutritive quality of the milk, and at the same time give enhanced keeping qualities. During the year holder-type pasteurising plants were installed and came into operation at the farm premises of two producer-retailers.

Three further producer-retailers have indicated their intention of installing pasteurising plant during 1971.

A major extension and re-equipment scheme at our largest dairy was completed during the year and a major extension is in progress at another large dairy which will increase the milk through-put to over 40,000 gallons per day.

It will be noted that in the sampling at processing dairies there were four phosphatase test failures (this test is the official test for the correct heat-treatment of milk) and 23 methylene blue test failures (for cleanliness and keeping quality). All the failures were fully investigated and steps taken to prevent recurrence. The number of methylene blue test failures is an increase on previous years. Eleven were from a large dairy at a time when dairy improvements were in progress and new dairy staff were being employed. The remaining failures were fairly uniformly distributed amongst the other processors.

Washed bottles are collected from each bottle-washing machine at the processing dairies at regular intervals so as to check the efficiency of the bottle-washing procedures. A total of 921 bottles was examined during 1970, 810 of which were satisfactory, 66 fairly satisfactory and 45 unsatisfactory. These results are an improvement on the previous year. The unsatisfactory results were resolved after appropriate action.

(c) Milk Distribution

The county council is responsible for the licensing of all milk distributors by the issue of dealer's pre-packed milk licences, and of all establishments where untreated milk is bottled, other than the farms where the milk is produced, by the issue of dealer's (untreated) licences.

These licences are in operation for a period of five years and the current period ended on 31st December, 1970. Thus in the latter part of the year, re-licensing of all milk distributors was carried out, and on the 1st January, 1971, 1,121 pre-packed milk licences and 6 untreated milk licences were in operation.

Inspection of all premises is carried out before new licences are issued, and systematic sampling is arranged to give coverage to all licensed dealers according to the types of milk being sold. Retail sampling of producer-retailers is also carried out, as is the sampling of milk supplied to county premises such as children's homes, schools, old people's homes and day nurseries.

The table of figures summarises the sampling work carried out under the various categories, with the results obtained.

Appropriate action is taken in the case of all unsatisfactory samples.

(d) Cream

A total of 15 samples of raw cream was submitted for brucella examination. All proved to be negative.

In past years the department co-operated with both the Public Health Laboratories in the countrywide survey into the bacteriological quality of cream on sale to the public.

It is well known that the bacteriological quality of cream on sale to the public leaves much to be desired, but the government has not so far found it possible to lay down statutory tests and statutory standards, nor has it been possible as yet to evolve a reliable test for the effective pasteurisation of cream (corresponding to the phosphatase test for pasteurised milk).

A report is now in the course of preparation by the Public Health Laboratory Service and it is hoped that this will contain recommendations which will resolve the current unsatisfactory situation.

General

(1) Liaison with County Planning Department

The department is being increasingly used by the planning department for comments on the public health aspects of planning applications.

During 1970, 45 applications for planning approval covering a wide range of activities were referred to the department and in each case full consideration of all public health aspects was given by the county public health officer and reports submitted for the assistance of the planning officers. In addition, the county public health officer attended a public inquiry on a planning matter of considerable local interest where public health aspects were very much involved, particularly atmospheric pollution.

(2) Liaison with County Surveyor's Department

Applications for the disposal of sewage effluent by connection into county council surface water drains are reported upon by the department.

Schemes of water supply, sewerage and sewage disposal dealt with by the department are also discussed with the county surveyor's department so that any matters affecting highways can be raised and dealt with.

(3) Nursing Homes, Old Persons' Homes, Disabled Persons' Homes, Day Nurseries and Play Groups

The county public health officer's section has continued to assist in work connected with the registration of these premises, particularly when difficulties arise with regard to structure, and sanitary and food hygiene arrangements. Plans for new homes, or for extension or adaptations, are also examined and suggestions made with a view to obtaining the best possible conditions and facilities.

(4) Food Hygiene

Matters of food hygiene continue to play an important part in the work of the section, particularly the routine inspections carried out in connection with the school meals service. A full report on this work is contained in the school health report for 1970.

The county public health officer maintains close liaison with the county catering organiser and studies the developments taking place in this field. The use of frozen foods in county premises and cooking by micro-waves are two of the subjects under active consideration at the present time.

Frozen foods are being used at six county welfare homes and this form of catering was also a major factor in enabling a rural studies centre to become established in a rural part of the county.

The code of practice on kitchen hygiene which will be used at all county establishments is now in the hands of the printers and the joint project between the architect's, education and health departments to produce a code for the construction and equipment of food premises is still proceeding.

(5) Working Party on Pollution in the Warrington New Town Area

At the end of the year, the general manager of the new town suggested the setting up of a working party of officers of participating authorities, to study pollution problems in the area in their widest sense with a view to working out measures for the improvement of the situation.

STATISTICS

(1) Analysis of Milk Samples collected during 1970

					UNTREATED						
					Total submitted	Biological Total	Bruc. Pos.	Cultural Total	Bruc. Pos.	Methylene Total	Sat.
Processing Dairies	...	...	...	...	—	—	—	—	—	—	—
Schools	...	...	...	...	21	21	—	—	—	21	21
County Premises	...	...	...	...	—	—	—	—	—	—	—
Dealers	...	..	...	...	2339	68	7	162	31	2339	1999
Farms	...	...	...	...	954	365	2	94	27	—	—
Individual Cow Samples	...	...	...	...	2711	58	2	422	119	—	—
TOTAL	...	...	...	...	6025	512	11	678	177	2360	2020

* i.e. test inapplicable due to atmospheric conditions

(2) Results of Bottle Rinse Examination

	Satisfactory	Fairly Satisfactory	Un-Satisfactory	Totals
Pasteurised Dairies	810	66	45	921
Untreated	199	2	31	232
TOTALS	1009	68	76	1153

(3) Sampling Summary

Premises or Distribution	Number	Milk	SAMPLES TAKEN	
			Washed Bottles	Cream
Processing Dairies (Pasteurising or Sterilising)	14	1819	921	—
Schools (excluding Crewe)	568	803	—	—
County Establishments	96	229	—	—
Dealers and Producer-Retailers	1326	6636	232	15
Farms (including individual cow samples)	203	3665	—	—
TOTALS	2207	13152	1153	15

PASTEURISED											
Blue		Penicillin		Methylene Blue		Phos.		Sterilised		U.H.T.	
Fail	Void*	Total	Pos.	Total	Sat.	Fail	Void*	Sat.	Fail	Total	Total
—	—	—	—	1744	1680	23	41	1739	4	75	—
—	—	21	—	782	685	44	53	369	—	—	—
—	—	—	—	229	219	4	6	155	—	—	—
209	131	1294	3	3845	3520	174	151	968	1	357	95
—	—	574	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
209	131	1889	3	6600	6104	245	251	3231	5	432	95

(4) Brucellosis—Untreated (Raw) Milk Statistics—1960-71

MILK SAMPLING BY COUNTY									
Year	Number of Raw Milk Herds	Dealer	Samples Collected I.C.S.*			Total	Milk Ring Test Positive		
			Bulk	Cows	Samples		Dealer	Bulk	I.C.S.*
1960	400†	—	563	—	—	563	—	—	—
1961	400†	285	702	—	—	987	—	—	—
1962	325	302	1395	—	186	1883	—	—	—
1963	335	244	2362	—	1031	3637	—	—	—
1964	319	365	2444	899	1150	3959	—	—	—
1965	286	2921	2336	1207	1438	6695	—	—	—
1966	263	2556	2229	1089	1271	6056	—	—	—
1967	253	3147	774	3132	3423	7344	569	220	594
1968	241	2764	624	1599	1738	5126	230	65	197
1969	206	2598	787	2489	2546	5931	207	58	317
1970	203	2360	954	2587	2711	6025	162	94	422
TOTALS		17542	15170	13002	15494	48206	1168	437	1530

- * Individual cow samples.
- † Approximately.
- ‡ Including previous years.

HEALTH DEPARTMENT				RAW MILK HERDS				HUMAN CASES NOTIFIED
Brucella Positive				No. of Herd Investigations	Brucella	Positive		(based on date of onset)
Total	Dealer	Bulk	I.C.S.*	Total	(County)	No.	%	
—	—	43	—	43	—	—	—	36‡
—	16	44	—	60	—	—	—	19
—	9	80	17	106	10	46	14.15	20
—	4	80	76	160	46	44	13.17	19
—	14	87	112	213	43	56	17.55	29
—	49	57	137	243	55	67	23.43	13
—	30	50	55	135	46	48	18.25	11
1383	38	34	81	153	198	69	23.32	9
492	42	19	52	113	81	49	20.33	5
582	46	17	120	183	93	53	25.74	11
678	38	29	121	188	74	42	20.69	22
3135	286	540	771	1597	646	—	—	194

WATER SUPPLIES, SEWERAGE AND SEWAGE DISPOSAL

The section continues to take a very active interest in the provision of these basic services throughout the county, and keeps in touch generally on problems arising and schemes proposed and in progress.

(a) Regrouping of Water Undertakings

As from 1st April, 1970, the number of undertakings serving the county was reduced to nine, and as it is likely that this will remain the situation for some time to come, a map is reproduced in this report showing the nine undertakings and the areas of the county which they serve. It is interesting to note that only two of the undertakings, Mid-Cheshire and Macclesfield, have areas of supply wholly within the administrative county.

(b) Fluoridation of Water Supplies

No progress was made in this direction during 1970, but the matter was to be brought before the health committee and the county council once again in the early months of 1971.

(c) Financial Assistance to District Authorities

During the financial year which ended on 31st March, 1970, a total of £55,126 was contributed by the county council to the county district councils which qualified for assistance either under the Rural Water Supplies and Sewerage Acts, 1944-66, or under section 56 of the Local Government Act of 1958.

In the financial year which ended on 31st March, 1971, the total was £78,809 of which £76,519 was contributed under the Rural Water Supplies and Sewerage Acts, 1944-66, and £2,290 under the Local Government Act 1958.

(d) Schemes of Water Supply, Sewerage and Sewage Disposal

During the year under review eleven schemes of sewerage and sewage disposal estimated to cost £136,865 were submitted by district councils for grants under the Rural Water Supplies and Sewerage Acts 1944-66. All the schemes, except one (which was not considered to be a rural locality), were approved subject to various suggested amendments, which were all agreed by the district councils concerned, and the schemes subsequently received the approval of the county council in these terms. No schemes of water supply were submitted.

In addition two applications were received from district councils seeking assistance from the county council under the terms of section 56 of the Local Government Act of 1958. This section empowers the county council to 'make any contribution the council thinks fit to expenditure of the council of a county district in the county'. These two schemes totalled £2,138,000 in estimated costs and involved works of sewerage and sewage disposal which did not rank for grants under the Rural Water and Sewerage Acts. These two schemes were investigated by the department from a technical standpoint. The county council's policy is to make contributions under this section only in the case of schemes which would impose an exceptionally heavy additional burden on the ratepayers of the area. Neither scheme was approved for the purpose of financial aid from the county council. The attached table summarises the schemes dealt with under the Rural Water Supplies and Sewerage Acts and also under the Local Government Act.

(e) Local Inquiries and Investigations of the Ministry of Housing and Local Government

During the year, inspectors of the Ministry held a number of inquiries into sewerage and sewage disposal schemes, and the department was represented at each by the county public health officer.

Rural Water Supplies and Sewerage Acts 1944-66—Applications dealt with during 1970

Authority and Description of Scheme	Estimated Cost	Decision
Bucklow R.D.C. Plumley (Plumley Moor Road) Sewerage Scheme	£1,752	Approved in principle; lump sum payment of £487
Chester R.D.C. Little Stanney Sewerage Scheme	£23,000	Approved in principle; grant £284 per $\frac{1}{2}$ year for a period of 30 years
Congleton R.D.C. Black Firs Sewerage Scheme, Somerford	£9,028	Approved in principle; match Ministry grant
Hale U.D.C. Main Drainage Scheme, Brooks Drive Area	£51,000	Withdrawn; not con- sidered to be a rural locality
Longdendale U.D.C. Mottram (Rabbit Lane) Sewerage Scheme	£1,639	Approved in principle; lump sum payment of £284
Macclesfield R.D.C. Prestbury (Heybridge Lane Stage 2) Sewerage Scheme	£9,026	Approved in principle; lump sum payment of £2,610
Nantwich R.D.C. Wistaston (Rising Sun) Sewerage Scheme	£9,000	Approved in principle; lump sum payment of £1,558
Northwich R.D.C. Acton (Warrington Road) Sewerage Scheme	£9,435	Approved in principle; grant of £133 per $\frac{1}{2}$ year for 30 years
Northwich R.D.C. Marston (Ollershaw Lane) Sewerage Scheme	£6,585	Approved in principle; lump sum payment of £1,900
Northwich R.D.C. Oakmere (Crabtree Caravan Site) Sewerage Scheme	£4,100	Approved in principle; lump sum payment of £897
Runcorn R.D.C. Appleton (Firs Lane) Sewerage Scheme	£12,300	Approved in principle; grant £140 per $\frac{1}{2}$ year for 30 years
TOTAL	£136,865	

Local Government Act 1958, Section 56—Applications during 1970

Authority and Description of Scheme	Estimated Cost	Decision
Lymm U.D.C. Lymm Sewage Disposal Works, proposed extensions	£138,000	Not approved
Northwich U.D.C. Re-sewerage of Town and new Sewage Disposal Works	£2,000,000	Not approved
TOTAL	£2,138,000	



COUNTY OF CHESHIRE WATER AUTHORITIES

- 1 - WIRRAL WATER BOARD
- 2 - WARRINGTON, RUNCORN & DISTRICT WATER BOARD
- 3 - MANCHESTER CORPORATION
- 4 - WEST PENNINE WATER BOARD
- 5 - STOCKPORT DISTRICT WATER BOARD
- 6 - MACCLESFIELD DISTRICT WATER BOARD
- 7 - MID-CHESHIRE WATER BOARD
- 8 - WREXHAM & EAST DENBIGHSHIRE WATER BOARD
- 9 - CHESTER WATER WORKS COMPANY

AMBULANCE SERVICE

AMBULANCE SERVICE

Although the service vehicles travelled only 44,000 miles more, an increase in patients of 16,882 was absorbed, reflecting the high degree of control effected by controls and station officers. The number of emergency calls has increased; it is now 21,800 annually, including ambulance calls to the M6 motorway—84 this year, involving 118 patients, almost three times the number in 1964. Too many motorists fail to appreciate relative speeds, and ignore warning signs and hazard lights.

The general increase in demand on the service made the provision of emergency cover throughout normal working hours very difficult, and this year extra staff have been engaged to convey sitting patients, thus relieving the load on ambulances. This innovation has led to improved emergency cover. A survey of the response to emergency calls indicates an average time to respond of 8 minutes throughout the county.

After working in poor premises in Macclesfield since 1948 the staff and vehicles are now accommodated in a new station which has every amenity and houses the area workshop.

Vehicle maintenance staff have been particularly hard pressed to keep old vehicles in good condition, because of the great delays in the delivery of replacements due to industrial disputes in the motor industry.

The ambulance training school has had another successful year. Four courses of six weeks' duration were completed, and eight courses of two weeks, also five special courses for instructors, a throughput of three hundred students. In addition a study for ambulance officers was held on major accident procedures. All Cheshire personnel are now well versed in 'ambulance aid' and are undertaking refresher courses to keep abreast of new techniques and equipment. In future, the training of Cheshire personnel will include training within hospitals.

The instructing staff and area officers undertake the first aid training of the county fire brigade staff, and the two services work well together at emergencies. First aid courses have been organised for school teachers, and instruction to pupils has been given in schools.

I should like to record my appreciation of the expert and willing help received from the staff of the Cheshire constabulary and the Cheshire county fire brigade in giving specialist instruction at Wrenbury Hall.

The following ambulance authorities have sent students for training at Wrenbury:

County Councils		County Boroughs	
Anglesey	Derbyshire	Birkenhead	Swansea
Caernarvon	Nottinghamshire	Chester	West Bromwich
Carmarthen	Northumberland	Derby	Wallasey
Flintshire	Yorkshire, East Riding	Manchester	Stockport
Merioneth	„ North Riding		
Westmorland			

In conjunction with the police and fire brigade special schemes have been developed for dealing with accidents in industries with special risks throughout the county.

It is now the practice in Sandbach, Holmes Chapel and South Cheshire to call doctors to emergencies. The co-operation of general practitioners in these areas has been readily forthcoming, and in the near future it is hoped that all will have mobile radios in their cars netted to the ambulance control.

The Telex system was installed throughout the service this year to reduce the load on the communication system. This scheme has reduced documentation considerably, and enables accurate messages to be passed to stations instantly in a form which is used by vehicle staff without the need for copying out. Work schedules are now passed to unattended stations at night, resulting in a quicker turn-out of staff.

A service discussion group has been established consisting of representatives of all stations and branches in the service. These discussions have provided the opportunity for new ideas from staff and a better understanding of policies and day to day problems.

The year was marred by industrial action by the staff in support of a national pay claim in October. Though emergency calls were unaffected, the heavy out-patient demand was seriously interrupted, hundreds of patients were unable to keep their appointments and the service was seriously disrupted. It is pleasing to report that staff at Dukinfield, Hazel Grove, Cheadle, Macclesfield, Tattenhall and some men at Bebington worked normally throughout the strike, which lasted from 1st October to 6th November.

New radio equipment has been installed and has eased the problems of control staff.

Statistics for 1970-71

Vehicles:

Ambulances	...	...	...	59	Staff	...	...	...	...	340
Dual-purpose vehicles			...	63	Stations		...	...	...	20
Handicapped persons' vehicles				5	Mileage		...	...		2,148,472

HEALTH EDUCATION

HEALTH EDUCATION

In the 1969 annual report reference was made to the efforts being made to provide a foundation for future organised health education. This process was continued during the year, and by co-ordinating the efforts of individual staff a programme has been commenced to reach members of the community. It is pleasing to report that many of the field staff have shown a direct interest in health education and are prepared to participate in speaking to organised groups of children and adults on the variety of topics comprising health education. However, it must be pointed out that for this interest to be maintained contact must be kept with the staff concerned, finding out their difficulties, providing advice, and generally showing them that we consider health education an important part of the health service.

In the past staff often lost interest when they could not easily obtain equipment and visual aids, but it has now been possible to purchase a reasonable amount for the use of speakers. Much of the equipment is kept at divisional offices so as to be readily accessible by local staff.

Health Education in Schools

The 1969 report referred to the working party which had been set up to consider health education in schools. Following many meetings a booklet entitled "A New Look at Health Education in Schools" was published by the Cheshire Education Committee. A copy was sent to all primary, secondary, and special schools in the county at the end of the summer term. In the autumn the booklet was followed up by seven meetings, arranged by the director of education, of head teachers to discuss the implication of the booklet and the implementation of health education in schools. It is intended that courses will now be arranged for teachers interested in this subject.

A one-day conference on drugs was held on a Saturday in April for teachers in the north-east of the county and proved most successful, with an attendance of 76. The speakers were of national repute, and specialists in their particular field of drug abuse. The arrangements for this conference were made by the director of education.

The early part of 1970 saw a renewed interest in the subject of sex education as a result of the B.B.C. schools programme on the subject. It did cause some controversy, but much of this was due to a misunderstanding of the principles underlying these programmes. An evening course was arranged for teachers at the Tarporley Teachers' Centre over seven weeks on sex education in the primary school. The course appeared to maintain its interest throughout, as the 30 members continued to attend, and from comments received it helped considerably in breaking down the apprehension that some teachers felt in discussing this subject in schools.

Many head teachers have expressed concern over the fact that they are responsible for hundreds of school children but frequently find that no teacher is experienced in first aid. In conjunction with the director of education, three one-day courses on emergency first aid were held for teachers, and in every case these were well attended. The courses were conducted by members of the county ambulance service training staff with assistance by the local Red Cross and St. John Ambulance Association. As a result of the one-day courses many teachers have now taken the full first-aid course carried out by these organisations.

The health education officer has continued to make contact with individual teachers, offering advice and guidance on health education programmes in school.

Training

The basis of any health education programme is a staff able to communicate in an understanding and interesting way the subject they are asked to speak on. Three courses were held during the year, one each for medical officers, dentists and health visitors. In addition one course on parentcraft was arranged in liaison with the chief nursing officer, and 70 midwives, health visitors and physiotherapists attended. It included two days on the preparation for childbirth and parenthood and one day on parentcraft teaching.

Home Safety

Every year approximately 7,000 people die from accidents in the home and untold thousands are injured, many seriously. Many of these accidents are caused through faulty equipment, but many more accidents are caused through the attitude "it couldn't happen to me." To reduce this toll of unnecessary accidents, a full educational home safety programme is to be implemented. The Royal Society for the Prevention of Accidents has a network of voluntary committees throughout the county based on local council boundaries. These committees can do very good work in promoting safety but they require the backing of local authorities. The Home Safety Act 1961 empowered local authorities to give financial aid and general support to these committees, but unfortunately the number of such committees in the county is very low. In an effort to stimulate greater interest in home accident prevention a one-day conference was held at county hall and all the local councils were invited to send delegates which resulted in 22 councils being represented. It is hoped that local councils will see the usefulness of voluntary home safety committees and lend support to them, and the health education officer would be pleased to accept the invitations to address councils on this subject.

The county assisted the Bebington voluntary home safety committee by providing display material for the county show. This is a useful venue for exhibition purposes as many thousands of people attend this show and hundreds flow past this exhibition. This year the themes were fire safety and poisoning.

Family Planning

The last report made reference to a survey which it was hoped might be carried out among married women to ascertain why there was not more use being made of the service. Members of the Cheshire branch of the Family Planning Association wholeheartedly supported this and with the aid of their voluntary staff the survey was carried out. It has provided very valuable material and much has been extracted by the health education officer, who has issued a report to the branch with recommendations which form a basis for an educational programme. This has been accepted by the branch committee and efforts are now being made for it to be implemented.

Cancer

Liaison has continued with the administrators of the Merseyside Cancer Education Committee and Manchester Committee on Cancer. A campaign was conducted in conjunction with the divisional medical officer at Altrincham and Sale to improve the numbers accepting cytology in the area. As a result of the use of special press advertisements, display material and efforts by field staff, 589 requested appointments.

Venereal Diseases

There is a continuing increase in the incidence of sexually transmitted diseases, mainly among those under the age of 25. The question of publicity presents some difficulty as it is more than providing information on what the venereal diseases are and where treatment can be obtained. If we are to be successful in reducing the incidence it must be appreciated that this is a behavioural disease and results from one's own actions. Therefore in addition to clinical information it is necessary to carry out social education. This can most effectively be done in discussing the subject and encouraging youngsters to look at their own social values and behaviour.

As part of the health education programme in schools it is hoped that teachers will include a discussion on the venereal diseases in the framework of personal relationships. It is proposed that eventually this will be expanded to include discussions in youth clubs. Medical officers and health visitors who have attended a course of health education have also had a lecture from a venereologist to provide them with up-to-date information. They in turn are available to visit schools and youth clubs by request.

Lectures

The health education officer has given a number of lectures during the year to student teachers, general practitioners, hospital nurses, and social workers, advising the importance of health education and the role that they can play in their particular field. In co-operation with the children's department all the children's homes were visited during the year, and discussions took place with the staff on sex education and personal relationships. This was a most satisfying assignment, as the staff have a very difficult problem to face, bearing in mind the varied age range of children and the experiences many of the children have had before coming to the home. It is hoped that these discussions were useful to the staff, as the health education officer felt he had learnt a great deal from them.

In September an advertisement was placed in local papers throughout the county informing secretaries of local organisations of the programme of talks in health education. The response has been very gratifying, and arrangements have been made to record the number of requests, subject matter, etc., in order that full details may be given in future reports.

For a programme of health education to have any possibility of success the co-operation of one's colleagues within the department and in other departments is essential, and it is pleasing to report that this has continued throughout the year 1970.

OCCUPATIONAL HEALTH

OCCUPATIONAL HEALTH

The service entered its second year of operation and continued to make progress in the study of health in relation to occupation.

Staff

After attending a course on Industrial Health, Dr. L. Rich was welcomed as an additional member of the medical team. In addition to the fully operational clinics at St. Martin's House, Chester, and the Health Centre, Gatley, it is expected that a further occupational health clinic will be started in Northwich to cover the Mid-Cheshire area. During the year, Mrs. D. Christian, S.R.N., who has assisted the medical officers at St. Martin's House since the service began, found it necessary to retire. In her place we have been fortunate in obtaining the services of Mrs. P. Evans, S.R.N. On the eastern side of the county some additional secretarial help is being provided by Mrs. Havers.

Clinical Work

An occupational health service in local government had to be on different lines from the traditional association with the factory, and it was for this reason that it was decided to adopt a preventive medical examination for chief officers and other senior staff. During the year a further 100 senior staff members were examined, almost completing the original batch of 207 members of staff. 88% of senior staff, offered this preventive medical examination, have accepted. Between June and December 39 members of staff were called for re-examination as a matter of routine, there being in addition those members of staff who were re-examined where a particular condition was indicated.

Cases of protracted sickness absence were referred to the service by the various departments, when an employee had been absent for a continuous period of four months. Some 40 cases were referred during the year. In some instances alternative or modified work had to be recommended but in some 10 cases permanent disability was indicated and premature retirement recommended.

I referred in my last report to new legislation concerning heavy goods vehicle drivers and to the medical examination required before an H.G.V. Licence could be issued. With the co-operation of the departments concerned, 81 drivers were medically examined during the year. In addition, teaching staff who are required to drive the school's minibus must also be in possession of a P.S.V. Licence and 10 members of staff were examined. There were 2 re-examinations carried out on the holders of the H.G.V. Licence and 1 of a P.S.V. Licence holder.

60 problem cases were also referred by the various departments during the year, and of these, 27 were considered permanently unfit for work and premature retirement was recommended. In the majority of cases advice was given to the employee, and if necessary the employing department, and normal duty was resumed.

During the year 17 new employees were examined at St. Martin's House as a result of direct referral to the occupational health service.

Resettlement Problems

These are not specifically referred to the service with a request for resettlement. They were referred on two main counts, (a) protracted sickness, or (b) when some doubt exists as to their ability to perform their job satisfactorily. The majority of cases involve manual workers, those employed by the county surveyor, the fire

brigade department or ambulance service, where physical ability to perform the job is essential and where following accident or illness there is a gross physical limitation. The second type of problem which involves administrative or professional staff is much smaller, and concerns those members of staff who have suffered prolonged sickness of a severe nature which has made them less and less able to carry on with their duties, and in fact referral is usually only considered after months or sometimes years of reduced working ability. Resettlement still presents a problem that only management can solve. The staffing committee, who are sympathetic to the new problem, have offered assistance by approving six supernumerary posts which are available for the placing of resettlement cases while efforts are made to find other employment.

During the year, the occupational health medical officers have been available for consultation on environmental matters, and have carried out special investigations into the following matters:

1. With the co-operation of the chief dental officer, an investigation into the possibility of mercury hazards being connected with the work of dental surgery assistants. Following tests and samples, no evidence of a hazard was found.
2. Extensive clinical work was undertaken in rubella testing of married women teachers for immunity to rubella infection as a form of preventive medicine.
3. Hearing requirements for ambulance men.
4. Talks on the function of an occupational health service have again been given to county council personnel in the course of the in-service training programme.

Liaison with hospitals

As part of the senior staff examinations, facilities for blood examination have been afforded to the service by a special unit at Sefton General Hospital. 128 samples of blood have been examined during the year.

In addition, professional advice is readily available to the service from consultants in medicine and radiology at the Chester Royal Infirmary.

The practicability of widening the scope for the preventive medical examination has been discussed, and during the coming year it is hoped that the preventive medical examination will be offered to middle management staff in addition to the routine periodic medical examination of certain fire and ambulance personnel.

Standards for fire service personnel have now been introduced and it is expected that arrangements will be made with the chief fire officer for the initial medical examination of all full-time firemen to be undertaken by the Occupational health service together with the periodic medical check-up for all firemen over the age of 40.

No doubt when the service develops further, more staff of all grades will use the facilities available as and when health problems in relation to work arise.

**VACCINATION
AND
IMMUNISATION**

VACCINATION AND IMMUNISATION

The computer-based appointments system continued to expand at a steady pace throughout the county, and by the end of the year vaccination and immunisation records were being processed on computer file for fourteen of the fifteen divisions in the administrative area. In addition, some 205 general practitioners were operating the scheme from their surgeries, an increase of 20% on last year. In Cheshire the aim has been to relieve the general practitioner of much clerical work and thus help to produce a much better immunity index by calling children for treatment as soon as this becomes due. There is indication that more and more general practitioners are attracted to the scheme, including some who were less enthusiastic when it was first introduced. It is expected that a high proportion of family doctors operating in the area will eventually take advantage of the many benefits that such a scheme has to offer.

During the latter part of the year measles vaccination was re-introduced, on the assurance from the Department of Health and Social Security that regular and sufficient supplies would be made available. The long delay had created a backlog of vaccinations that were due, and it became necessary to restrict the number of appointments issued so that attendances at the various surgeries and county clinics would not be excessive. To help reduce the number of outstanding vaccinations, it was decided to offer the parent only one appointment, unless of course a valid excuse was received for failing to attend.

With the installation of the new IBM 360/40 computer in the county treasurer's department, 64,000 records are now held on two disk files which are updated on two evenings each week. The computer programme was also extended and modified to include pre-school boosters due at the age of 4½ years.

The percentage of children throughout the county who were born in 1969, and immunised against diphtheria, whooping cough, tetanus and poliomyelitis in 1970, was 72.6%. It is expected that the scheme will be fully centralised by the spring of 1971, and there is every indication that the results will compare favourably with those obtained in other areas where computer methods are used.

B.C.G. Vaccination

Children aged 12-14 are eligible for B.C.G. vaccination, as are also those young people above the age of 14 who are either at school or attending universities or other educational establishments.

Although the programme for vaccinating school children is the main element of the work, known contacts of tuberculous patients are also included without age restriction.

In 1969, 7,752 school children were vaccinated, 10,116 being skin-tested. 394 contacts were vaccinated, 502 being skin-tested.

The figures for 1970 were:

							Vaccination	Skin-tests
Schoolchildren	...	...	...	...	...	...	13,489	15,531
Contacts	...	...	...	...	...	...	265	212

Rubella Vaccination

Details of the work on rubella vaccination in schools (pupils and teachers) are given in the School Health section.

RESEARCH

RESEARCH

This annual report covers the first full year that the staff now in the research section have been together as a team. Early in the year the section was augmented by the transfer to it of Mrs. Sandra Harper, B.A., as assistant research officer.

The activities of the section have increased considerably over the year. The regular work has continued on preparation and issue of published material, on survey and analysis of reports and other documents received from government departments and committees of enquiry, and on maintenance of the departmental library of books, journals and maps. The section on request supplies information and statistics to assist the organisation and planning of services, and data produced by the field services are analysed when necessary to produce information about changes in requirements. However, the greater part of the work of the section involves major research projects, of which a number in progress during the year are worthy of mention. The year also saw publication of the results of the handicapped persons survey which was carried out during 1969.

One of the larger research projects in 1970 has been a study of patterns of work in the domiciliary nursing service. The purpose of this was to indicate the optimal direction for the future development of the service, including the supporting facilities required. It involved recording all the professional activities of every nurse in the county for a seven-day period. The results also indicated the influence of demography on work patterns, and the changes in work to be expected following attachment of nurses to general practitioners. The findings of the survey have been used in the preparation of recommendations for future staffing policy. Further details of this study can be found in the report on nursing services.

A comprehensive survey was organised on behalf of the Cheshire Branch of the Family Planning Association, who wished to ascertain the future developments needed in the organisation and publicity of their services. At their request a survey was designed and the results analysed by the section, though the survey itself was carried out entirely by the Family Planning Association's Cheshire branch. The preliminary results have been published by the branch and have aroused considerable interest, and the branch is now considering the practical implications of the findings.

Bearing in mind the role of the health department as an employer, a detailed analysis of the trends of staff sickness over the past ten years has been carried out during the year. The first results are already giving rise to consideration of better means of monitoring, and of preventing, staff sickness. The next area to be studied will be referrals to the occupational health service.

At the request of the health education officer, a pilot study was carried out into the feasibility of conducting research into the patterns and causes of home accidents. The aim of this would be to identify practical action or areas of publicity which could be undertaken to prevent such occurrences. This investigation involved the study of accidents referred to the ambulance service in selected areas of the county. The results have been encouraging, and it is proposed to implement the study on a wider scale during 1971.

Another function of the research section involves participation in the forward planning of new services. At present, attention is being paid to two health screening projects. As was reported last year, a new computer-managed cervical cytology scheme has been designed, and this has now been in operation in a pilot area for three months. The public response to this scheme has so far been good, and it is hoped to expand the pilot area. The second project, which is still at the discussion and planning stage, is an evaluation of different approaches to geriatric screening.

The health department's links with the department of social and preventive medicine of the university of Manchester in the fields of epidemiological research and the planning of preventive medical services have been strengthened by the admission of the research officer as a post-graduate member of that department. The work of the section has also led to interest and enquiries from several authorities and organisations throughout the country, and the research officer was invited to attend the annual conference of the Society for Social Medicine.

Forthcoming topics for the research section to study are likely to concentrate on the evaluation of methods of screening population groups for the early detection of illness, and on determining patterns of incidence of certain illnesses. There is no shortage of worthwhile projects which could profitably be undertaken, and which would produce rewards both medical and economic.

OTHER SERVICES

OTHER SERVICES

Chiropody

Twelve full-time chiropodists have been appointed to cover most health divisions in the county, and service continues to be given also by private chiropodists on the county's approved list. Those eligible for help under the county chiropody scheme comprise persons over the age of 65, physically handicapped persons, and expectant mothers, in all cases subject to medical recommendation. Some are seen at specially equipped clinics, old people's clubs, etc., and many at the private chiropodist's surgeries; in special cases patients can be treated at home.

	1969	1970
Number of cases	14927	15050
Number of treatments	76623	76882

A limited service for the inspection and treatment of school children is also given in some areas.

Convalescence

The assistance given to approved applicants, either for short periods (usually up to a few weeks) by way of recuperation, or to provide relief where relatives are under the constant strain of caring for mentally subnormal and other handicapped members of the family, remains an important part of the county council's after-care medical services.

	1969	1970
Recuperative convalescence	137	166
Other short-stay accommodation	246	254

Loan of Nursing Equipment

The number of items available to the public for loan to persons in special need are many and varied. Stocks of nursing equipment are held by district nurses, and larger items are available on application to divisional medical officers. The service enables many people to manage in their own homes who might otherwise require hospital or other accommodation. Apart from the obvious economies resulting, this service provides the means for persons requiring such aids to remain in the atmosphere and amongst the friends they know, and this is in itself a useful form of therapy.

Help in the Home

Again in 1970, as in 1969, there was an increase in the number of households helped, though the total number of hours, and the number of whole-time helps, went down. The number of home helps employed in 1970 was 10 whole-time and 1,430 part-time, and 7,538 households received a total of 940,441 hours help. In selected cases, use is made of the "good neighbour" scheme. The principle is that a woman shall "adopt" an elderly person or couple, or handicapped person, and perform such services as are necessary, including housework, provision of meals, shopping, changing of library books, etc., and providing companionship. Payment is not by the hour as in the home help service, but a fixed weekly sum is paid irrespective of the number of hours worked. There were 11 such "good neighbours" in 1970.

Home help organisers are being encouraged to qualify through the examinations of the Institute of Home Help Organisers.

In 37 cases night 'sitters-in' were provided (compared with 42 cases in 1969). Night 'sitters-in' may be employed in cases of serious illness, in the absence of any relative or friend reasonably available, for a stated period, not more than 14 days unless approved by the chairman of the divisional health committee.

HEALTH SERVICES STATISTICS

CHILD HEALTH AND NURSING SERVICES

Dental Service (Mothers and Young Children)

	Children 0—5	Expectant and Nursing Mothers
Visits for treatment	4912	1951
Number of teeth filled	3134	1195
Number of teeth extracted	1801	703
Patients given first inspection	3000	528
Number of such patients requiring treatment	1987	495
Number offered treatment	1948	490

Ante-Natal Clinics and Relaxation Classes

Ante-Natal Clinics				Relaxation Classes
Number attending for Examination		Number of Sessions held by		No. Attending
Ante-Natal	Post-Natal	Midwives	Doctors	
14369	121	815	729	8674

Notification of Births (Live and Still)

Distribution of births notified under Public Health Act, 1936:

Year	Domiciliary	Institutional	Total
1970	2560	15020	17580
1969	2922	14559*	17481

* Corrected figure.

Child Welfare Centres

Number of Children Attending				Number of Sessions held			
Born 1970	Born 1969	Born 1965-68	Total	Medical Officers	Health Visitors	G.P.s	Total
15274	9898	10134	35306	1034	412	4940	6386

Day Nurseries (L.H.A.)

Number of Nurseries	Number of Approved Places	Average Daily Attendance	Number on Register 31.12.70
13	574	416	505

Premature Babies

Weight at Birth	Number born Alive	Died in first 24 hours	Died 1—27 days
2 lbs. 3 ozs. or less	37	25	8
Over 2 lbs. 3 ozs.	60	19	9
Over 3 lbs. 4 ozs.	200	16	8
Over 4 lbs. 6 ozs.	245	11	4
Over 4 lbs. 15 ozs.	495	6	8
Total	1037	77	37

Nurseries and Child Minders Regulation Act, 1948

Number on Register at 31.12.70:

(a) Nursery Premises	254
Places	6002
(b) Child Minders	275
Places	1666

Work of Health Visitors

Category	Number of Cases Visited
Children aged up to 5 years	65731
Persons aged 65 or over	7903
Mentally disordered persons	598
Persons discharged from hospital (excluding maternity cases and mental hospitals)	597
Number of tuberculosis households visited	567
Number of households visited on account of other infectious diseases	179
Other cases	6306

Centres

	Health Centres	CLINIC CENTRES			Total
		Purpose Built	Adapted	Sessional	
Number of premises in use 31.12.70	5	42	24	65	137

Home Help

	Aged 65 or over on First Visit	Aged under 65 on First Visit				Total
		Chronic Sick	Mentally Disordered	Maternity	Others	
Number of cases	6181	471	40	356	490	7538

Mother and Baby Homes

	Prospect House, Hoylake (L.H.A.)			Average duration of stay (days)
	No. of cases admitted during year	No. of beds at end of year		
Ante-Natal	55	20		48
Post-Natal	—	—		19
Number of cases for which financial responsibility was accepted elsewhere—7				

Work of Home Nurses

Number of Persons Nursed during year	Number of Persons Nursed who were aged (at 1st visit) Under Five years	65 years and over
19850	409	12665

Work of Midwives

Number of domiciliary confinements attended				No. of hospital confinements discharged before tenth day
Doctor not booked		Doctor booked		
Dr. present	Dr. not present	Dr. present	Dr. not present	
2	17	424	2045	12505

Nursing Services—Staff Employed, 30.9.70

Category	Whole-time	Part-time	W.T. equivalent of P.T.
Health Visitor/School Nurse	170	—	—
Home Nurse	136	66	44
Midwife	84	66	22
Supervisory (home nursing and midwifery)	8	—	—

Cervical Cytology

Number of sessions	Number of patients	Total attendances	Results of Examinations		
			(a) N.A.D.	(b) For Invest.	(c) Number in (b) found Positive
1252	13497	15071	13699	367	58

Congenital Malformations

During 1970 there were 279 cases notified, as compared with 292 for 1969.

MENTAL HEALTH

Admissions to Mental Hospitals under Mental Health Act 1959

s. 5		s. 25		s. 26		s. 29		s. 60		s. 65		s. 135		s. 136		Total	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
370	532	145	249	44	42	52	70	12	—	—	—	—	2	2	—	625	895

Training Centres for the Mentally Subnormal

No. attending 1.1.70	During year		No. attending 31.12.70	No. attendances 1970-71
	No. admitted	No. discharged		
Adult (6)				
577	125	84	618	113009
Junior (7)				
420	137	64	420	72242

In addition, 52 subnormals attended the centres of five voluntary associations for spastics.

Admissions to Hospitals for the Mentally Subnormal

During the year 24 vacancies were found for patients requiring hospital vacancies for subnormality.

Number of persons under L.H.A. care at 31.12.70

Mentally Ill		Psychopathic		Subnormal		Severely Subnormal		Total
Under 16	16 and over	Under 16	16 and over	Under 16	16 and over	Under 16	16 and over	
1	974	—	3	2	712	585	602	2879

Staff at 30.9.70

Trainee M.W.O.s		Mental Welfare Officers			Chief M.W.O.	Total
		M.W.O.s	Area	M.W.O.s		
7		43		9	1	60

Training Centres

Supervisory Staff				Assistant Staff				Total
For Adults		For Children		For Adults		For Children		
Qual.	Other	Qual.	Other	Qual.	Other	Qual.	Other	
6	—	7	—	14	32	27	33	119

VACCINATION AND IMMUNISATION

	Under 1 yr.	1-2 yrs.	2-4 yrs.	5-15 yrs.	Total
Smallpox Vaccination					
Vaccinated	274	5786	2757	773	9590
Re-vaccinated ...	—	—	394	972	1366
Total	274	5786	3151	1745	10956

Vaccination of persons under age 16 completed during 1970

TABLE 1. Completed Primary Courses—Number of persons under age 16:

Type of Vaccine or Dose	Year of Birth					Others under age 16	Total
	1970	1969	1968	1967	1963-66		
1. Quadruple D.T.P.P.	—	—	—	—	—	—	—
2. Triple D.T.P.	431	8961	2991	541	692	71	13687
3. Diphtheria/Pertussis	—	36	2	1	2	—	41
4. Diphtheria/Tetanus	3	51	36	7	291	116	504
5. Diphtheria	3	7	2	13	4	4	33
6. Pertussis	—	6	8	—	—	—	14
7. Tetanus	7	13	6	11	180	1152	1369
8. Poliomyelitis, Salk	—	—	—	—	—	—	—
9. Poliomyelitis, Sabin	379	8987	2703	200	638	446	13353
10. Measles	19	2947	4246	1707	1426	921	11266
11. Rubella	—	—	—	—	—	1972	1972
12. Lines 1+2+3+4+5 (Diphtheria)	437	9055	3031	562	989	191	14265
13. Lines 1+2+3+6 (Whooping Cough)	431	9003	3001	542	694	71	13742
14. Lines 1+2+4+7 (Tetanus)	441	9025	3033	559	1163	1339	15560
15. Lines 1+8+9 (Polio)	379	8987	2703	200	638	446	13353

TABLE 2.—Reinforcing Doses—Number of persons under age 16:

Type of Vaccine or Dose	Year of Birth					Others under aged 16	Total
	1970	1969	1968	1967	1963-66		
1. Quadruple D.T.P.P.	—	—	—	—	—	—	—
2. Triple D.T.P.	1	308	1073	253	2846	205	4686
3. Diphtheria/Pertussis	—	—	—	1	17	—	18
4. Diphtheria/Tetanus	1	14	430	359	8453	1115	10372
5. Diphtheria	—	—	—	2	40	34	76
6. Pertussis	—	—	1	1	1	—	3
7. Tetanus	1	2	4	16	216	1166	1405
8. Poliomyelitis, Salk	—	—	—	—	—	—	—
9. Poliomyelitis, Sabin	1	153	962	547	11542	2275	15480
10. Lines 1+2+3+4+5 (Diphtheria)	2	322	1503	615	11356	1354	15152
11. Lines 1+2+3+6 (Whooping Cough)	1	308	1074	255	2864	205	4707
12. Lines 1+2+4+7 (Tetanus)	3	324	1507	628	11515	2486	16463
13. Lines 1+8+9 (Polio)	1	153	962	547	11542	2275	15480

VARIOUS

Alterations to Property

During 1970 financial help was given towards the cost of adaptations inside or outside the homes of 306 handicapped persons to enable them to overcome their difficulties.

Car Badges for Severely Disabled Drivers

338 applicants were using these special badges at the end of 1970.

Clinics for Old People

	Number of sessions held	Number of new patients	Total number of patients	Total attendances
Geriatric (Consultant) ...	56	72	299	563
Health Advisory	66	84	175	924

Family Planning

During 1970, attendances of Cheshire residents at family planning clinics held at county clinic centres and at centres in adjacent areas numbered 48,978, and there were 7,371 new cases.

Comparisons of various rates with previous years

	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961
Live Birth Rate (per 1,000 population)	16.3	16.4	17.2	17.7	17.8	18.1	18.6	18.3	18.0	17.4
Illegitimate as percentage of Total Live Births	6	6	6	5.9	5.1	4.6	4.4	3.7	4.2	3.6
Stillbirth Rate (per 1,000 Live and Still Births)	12	13	14	15	14.6	16.3	15	18.1	17.5	19.7
Death Rate (per 1,000 population)	11.5	11.3	11.4	11.3	11.6	11.4	11.3	12	12.1	12.2
Infant Mortality Rate (deaths under 1 year to 1,000 live births)	17	16	18.6	16.3	17.2	18.6	18.1	18.7	23.6	17.6
Neo-natal Mortality Rate (deaths under 4 weeks to 1,000 live births)	11	12	13.4	10.9	11.7	13.1	12.6	12.3	14.6	12.9
Early Neo-natal Mortality Rate (deaths under 1 week to 1,000 live births)	9	10	11.2	9.6	10.3	11.1	11.0	10.6	12.1	10.8
Perinatal Death Rate (still births and deaths under 1 week per 1,000 births live and still)	22	23	25	24	24.8	27.3	25.9	28.6	29.4	30.3
Maternity Mortality Rate	0.112	0.06	0.11	0.11	0.38	0.32	0.22	0.28	0.58	0.18

The following table shows the variation in notifications of some important infectious diseases over the past ten years:

	1970	1969	1968	1967	1966	1965	1964	1963	1962	1961
Measles	6775	1460	7196	7410	16814	9093	9440	11130	4762	13645
Scarlet fever	284	314	377	573	929	623	384	345	386	439
Whooping cough	241	60	214	700	317	367	834	522	152	294
Poliomyelitis	—	—	—	1	1	5	2	3	4	18
Diphtheria	—	—	—	—	—	—	—	—	—	—
Tuberculosis:										
Pulmonary	110	114	80	124	135	150	195	172	234	219
Non-Pulmonary	20	20	13	20	15	21	38	21	33	41

Causes of Death

The table below shows the trend in some important causes of death over the last ten years (rate per million population):

			1970	1969	1968	1967	1966	1965	1964	1963	1962	1961
B.5 & 6 (1)	Respiratory Tuberculosis		17.6	22.4	23.7	29.8	25.4	27.9	33.6	34.3	42.4	47.6
	Malignant Neoplasm											
B.19.1	Buccal cavity, etc.		30.6	32.7								
B.19.2	Oesophagus		63.1	58.0								
B.19.3	Stomach	M	166	138	132	133	150	145	150	184	167	190
		F	104	114	126	113	114	136	111	118	121	119
B.19.4	Intestine	M	144	189								
		F	165	174								
B.19.5	Larynx		12.1	12.1								
B.19.6	Lung, Bronchus	M	462	404	434	437	397	391	424	398	370	379
		F	76.9	78.6	93.7	79.9	89.9	69.7	67.3	61.4	60.4	61.7
B.19.7	Breast		197	205	178	221	208	207	203	223	200	214
B.19.8	Uterus		79.7	73.0	72.3	79.0	77.2	85.0	101	98.9	92.1	91.0
B.19.9	Prostate		82.5	73.0								
B.19.10	Leukaemia		62.1	64.6	55.9	52.0	46.0	51.0	63.2	62.4	44.5	45.5
B.19.11	Others *	M	247	275	554	555	517	521	467	530	508	478
		F	302	313	513	530	490	509	453	472	465	454
B.21	Diabetes		95.5	88.0	103	71.2	75.2	59.0	82.0	82.2	93.2	87.7
B.28	Ischaemic heart	M	1642	1544	1573	1511	1465	1537	1451	1393	1360	1366
		F	1086	1072	1062	907	957	966	898	896	901	835
B.30	Cerebrovascular	M	717	683	691	735	760	709	747	783	754	741
		F	1105	1080	1095	1035	1100	1076	1029	1123	1144	1188
B.31	Influenza		170	64.6	71.9	62.6	80.1	5.0	16.3	54.1	91.1	185
B.32	Pneumonia		836	773	772	725	655	573	588	729	686	587
B.33 (1)	Bronchitis		524	561	583	591	618	608	572	691	669	584
B.34	Peptic Ulcer		66.8	80.5	78.6	82.8	64.5	72.7	64.2	66.6	85.8	93.1
B.38	Nephritis, etc.		44.5	56.1	63.4	45.2	54.7	56.0	65.2	72.9	79.4	65.0
BE.47	Motor Accidents		141	168	149	170	187	178	163	173	130	182
BE.48	Other Accidents		158	180	151	176	170	153	188	202	199	201
BE.49	Suicide	M	46.4	44.9	39.8	41.4	44.0	47.8	52.0	61.4	68.8	74.7
		F	30.1	33.7	30.3	36.6	43.0	36.8	41.0	44.7	51.9	52.0

* "Others" before 1969 included buccal cavity, oesophagus, intestine, larynx and prostate, which are given separately from 1969 onwards.

Tuberculosis Statistics

Deaths

Year	B.5 & B.6(1) Pulmonary		B.6(2) Non-Pulmonary	
	Number	Rate per 1,000 pop.	Number	Rate per 1,000 pop.
1970	19	.018	3	.0027
1969*	24	.022	6	.0056
1968*	25	.023	8	.0076

* Corrected figures.

Contacts

Number of contacts examined of persons notified as tuberculous—1,631.

Infantile Mortality

Graph showing rate per 1,000 live births since 1950.



NOTIFICATIONS OF INFECTIOUS DISEASE, 1970

	Scarlet Fever	Whooping Cough	Measles ex. Rubella	Dysentery	Ac. Encephalitis Post-Infective	Anthrax	Tetanus
Altrincham M.B.	15	33	61	9	—	—	—
Bebington M.B.	17	18	390	2	—	—	—
Congleton M.B.	14	7	49	—	—	—	—
Crewe M.B.	2	18	197	5	—	—	—
Dukinfield M.B.	—	7	152	3	—	—	—
Ellesmere Port M.B.	4	8	580	6	1	—	—
Hyde M.B.	11	1	207	3	—	—	—
Macclesfield M.B.	20	7	160	—	—	—	—
Sale M.B.	33	23	519	2	—	—	—
Stalybridge M.B.	—	6	324	1	—	—	—
Alderley Edge U.D.	3	8	1	—	—	—	—
Alsager U.D.	—	3	28	—	—	—	—
Bollington U.D.	—	—	4	3	—	—	—
Bowdon U.D.	—	1	5	—	—	—	—
Bred. & Rom. U.D.	12	16	118	1	—	—	—
Cheadle & Gatley U.D.	7	7	350	1	1	—	—
Hale U.D.	—	4	17	—	—	—	—
Hazel Grove & Bramhall U.D.	3	1	149	—	—	—	—
Hoylelake U.D.	7	6	197	2	—	—	—
Knutsford U.D.	—	4	66	—	—	—	—
Longdendale U.D.	—	3	21	1	—	—	—
Lymm U.D.	1	—	193	—	—	—	—
Marple U.D.	—	—	172	—	—	—	—
Middlewich U.D.	—	—	23	—	—	—	—
Nantwich U.D.	1	—	100	—	—	—	—
Neston U.D.	6	—	165	2	—	—	—
Northwich U.D.	4	2	225	—	1	—	—
Runcorn U.D.	27	11	317	—	—	—	—
Sandbach U.D.	7	1	122	2	—	—	—
Wilmslow U.D.	2	7	45	—	—	1	1
Winsford U.D.	—	—	206	—	—	—	—
Wirral U.D.	8	5	145	16	—	—	—
Bucklow R.D.	4	6	50	—	—	—	—
Chester R.D.	5	—	110	23	—	—	—
Congleton R.D.	3	1	86	14	—	—	—
Disley R.D.	4	—	86	—	—	—	—
Macclesfield R.D.	4	—	60	—	—	—	—
Nantwich R.D.	3	15	158	3	—	—	—
Northwich R.D.	34	8	276	—	—	—	—
Runcorn R.D.	22	4	349	—	—	—	—
Tarvin R.D.	1	—	290	—	—	—	—
Tintwistle R.D.	—	—	2	—	—	—	—
TOTAL	284	241	6775	99	3	1	1

	Food Poisoning	Tuberculosis Respiratory	Tuberculosis Meningitis & C.N.S.	Tuberculosis Other	Ophthalmia Neonatorum	Malaria	Acute Meningitis	Infective Jaundice
Altrincham M.B.	1	6	—	—	—	—	1	4
Bebington M.B.	15	4	—	—	—	—	1	18
Congleton M.B.	—	6	1	1	—	—	—	—
Crewe M.B.	9	6	—	—	—	—	—	1
Dukinfield M.B.	—	7	—	1	—	—	—	1
Ellesmere Port M.B.	—	1	—	2	—	—	—	13
Hyde M.B.	1	3	1	—	—	—	—	8
Macclesfield M.B.	6	5	—	1	—	—	—	6
Sale M.B.	4	8	—	1	2	—	—	32
Stalybridge M.B.	9	1	—	2	1	—	—	12
Alderley Edge U.D.	—	—	—	—	—	—	1	1
Alsager U.D.	—	1	—	—	—	—	—	3
Bollington U.D.	—	2	—	—	—	—	—	—
Bowdon U.D.	4	1	—	—	—	—	—	—
Bred. & Rom. U.D.	—	3	—	—	—	—	1	1
Cheadle & Gatley U.D.	—	9	—	—	—	—	3	9
Hale U.D.	2	2	—	—	—	—	—	1
Hazel Grove & Bramhall U.D.	2	2	—	—	—	—	—	8
Hoylake U.D.	—	1	—	1	—	—	—	2
Knutsford U.D.	—	—	—	—	—	—	—	1
Longdendale U.D.	—	1	—	—	—	—	1	6
Lymm U.D.	—	1	—	—	—	—	1	2
Marple U.D.	2	4	—	1	—	—	—	2
Middlewich U.D.	—	—	—	—	—	—	—	—
Nantwich U.D.	—	—	—	—	—	—	—	—
Neston U.D.	—	—	—	—	—	—	—	1
Northwich U.D.	1	—	—	—	—	—	—	4
Runcorn U.D.	1	4	—	1	—	—	2	7
Sandbach U.D.	—	2	—	—	—	—	—	—
Wilmslow U.D.	—	6	—	—	—	—	—	2
Winsford U.D.	74	—	—	—	4	—	—	18
Wirral U.D.	—	1	—	2	—	—	—	4
Bucklow R.D.	4	2	—	1	—	—	—	5
Chester R.D.	2	3	—	—	—	—	1	8
Congleton R.D.	2	7	—	—	—	—	—	2
Disley R.D.	—	—	—	—	—	—	—	—
Macclesfield R.D.	1	—	—	1	—	1	—	7
Nantwich R.D.	2	2	—	2	—	1	—	2
Northwich R.D.	1	5	—	—	—	—	—	2
Runcorn R.D.	—	4	—	—	—	—	—	6
Tarvin R.D.	—	—	—	—	—	—	—	—
Tintwistle R.D.	—	—	—	1	—	—	—	—
TOTAL	143	110	2	18	7	2	11	198

There were no cases of poliomyelitis, diphtheria, smallpox, typhoid, or paratyphoid.

CHESHIRE COUNTY COUNCIL

SCHOOL HEALTH 1970

INTRODUCTION

Mr. Chairman, Ladies and Gentlemen,

I present herewith my annual report on the school health service for the year 1970, which reflects the work carried out during that calendar year.

There were not important changes in the numbers of medical and dental staff, and at the end of the year medical officers in the department (school medical officers) were 21 in number (whole-time equivalent), compared with an establishment of 22. The number of dental officers in post at the end of the year was a whole-time equivalent of 36.4, the same as the previous year, compared with an establishment of 46.

So far as the fundamental routine of the work is concerned, this has been a year of consolidation rather than of innovation. In the last report I referred to the gradual extension of the new routine adopted for medical examination in the school health service, following the revised routine adopted for examining pre-school children. I have now to report that the new routine is operating satisfactorily in all but one small district, and that will soon be brought into line.

There has unfortunately been an increase in the number of children found to be infested with vermin (8,446 compared with 5,068 in 1969). Cases of scabies coming to light have also increased slightly, in line with the national trend. Hygiene inspections have been reduced owing to the increasing demands made on the nursing services as the result of attachment to general practice. However, an increase in establishment, taking the needs of hygiene inspection fully into account, had been agreed by the end of the year, and it is hoped that the position can be rectified. There would not appear to be any quick or easy way of reducing the incidence, but a number of discussions have taken place between medical and teaching staffs with a view to improving reporting procedure, and this should make a useful contribution.

This is the first year that full-time county-employed chiropodists have played a part in the school health service. They should be particularly helpful in the early detection of foot deformities and in the treatment of conditions such as verruca, which have given so much trouble in some schools.

During the year the education department produced a booklet 'A New Look at Health Education in Schools.' Several medical and dental members of the staff as well as the health education officer made useful contributions to this booklet.

Dr. Moody, who is a medically qualified audiologist, has taken over a great deal of the work formerly done by Professor Ian Taylor. In addition to giving an opinion on individual children, Dr. Moody has undertaken the training of staff and the instruction of parents.

It is with sadness that we record the death in post of Mrs. Martin, who was in her fourth year of service as a county peripatetic teacher of hearing impaired children.

The child guidance service continued to make strides. A third whole-time consultant (Dr. Strelau) was appointed during the year, and it is hoped that one further appointment will be made in 1971. In consequence of the Summerfield Report the psychologists are now settling down as officers of the education department. Teamwork is good, and better screening procedures should in time reduce pressure on consultants and ensure more profitable use of their time.

With the co-operation of the Director of the Public Health Laboratory at Manchester, teachers of child-bearing age are offered a test to demonstrate their immunity or otherwise to Rubella (German measles). Such information is invaluable, not only to the individual but also in determining what action to take when a pregnant teacher is in a school where the disease is present.

On the hygiene side, tables are given which show the results of a complete investigation into the sanitary circumstances and the cooking and feeding arrangements in schools throughout the county. Such information will be necessary in determining priorities when bringing certain establishments up to standard. During the year a code of practice for kitchens and staff was produced, advice having been sought from a sub-committee of divisional medical officers and from the Director of the Chester Public Health Laboratories. All procedures were reviewed and brought up to date and any practices which had become obsolete or unnecessary were abandoned.

On the dental side the demand for treatment has risen by 30% over the past two years. There has also been an increase in productivity resulting from measures taken by the principal school dental officer, though the recruitment of dentists still causes considerable difficulty.

The mobile unit has been fully occupied in the rural area of west Cheshire, and there may be a case for a second unit in the east of the county.

My thanks are due for the various contributions to this report, particularly by Dr. I. Chesham, Mr. T. B. Dowell (dental), Dr. A. Holmes-Smith (ophthalmic) and Mr. W. Pembleton (environmental).

I wish also to express my appreciation of the co-operation and help received from the Director of Education and his administrative staff and from head teachers and their staffs. I should also like to thank the Chairman and members of the Education Committee, and particularly of the Special Services Sub-Committee, for the help and support they have given at all times.

B. G. GRETTON-WATSON,
Principal School Medical Officer.

June 1971.

GENERAL

Selective School Medical Examination

The system of selective school medical inspection has now been extended, in principle, throughout the county, save for one education area (where the school medical officer is likely to retire next year).

The medical staff have found that the first year in which they put the system into operation (involving the examination of children before they start school) does entail additional work, but those who have operated the scheme for more than 12 months find it much more professionally satisfying. There is more opportunity to pay attention to children with problems, and much more opportunity—for the enthusiastic school doctor—to meet teachers in schools to discuss cases and common problems.

I believe, however, that the new system demands more organisational efficiency than the 'routine' system did, so that in various ways selective medical inspection provides for the doctor (to use the vogue word) a "challenge".

33,135 children were medically inspected in 1970, and 4,621 children were "interviewed or discussed but found not to warrant a medical examination" (in the words of the Department of Education and Science) compared with 31,215 children inspected in 1969. However, the improved figures for 1970 are probably in part a reflection of the satisfactory staffing situation for the year. The numbers of "special" examinations and re-examinations show a slight decrease over the previous year.

Audio-Vision Testers

I consider the services of these technicians (all of whom have had experience of Cheshire's school health service before employment in their present capacity) to be invaluable, especially where a selective system of inspection is in operation. The Technicians now undertake the audiometric testing of hearing of school entrants and of children in their first year of junior school, vision testing (distance) of 7 and 9 year olds, and near and colour vision of 9 year olds. Failures on testing are referred to school medical officers, who are then responsible for further action.

	VISION		HEARING	
	7 years (distance)	9 years (near, distance, colour)	5 years	7 years
No. of children examined in school	11,854	10,083	18,390	10,893
Percentage referred to school doctor	12.8 %	Near—8.6 % Distance—12.9 % Colour—4.7 %	12.7 %	8.8 %

School Nurses

Special training was given to a small group of clinic nurses at the close of 1969, so that they could undertake special work in the secondary schools to complement the selective school medical inspection system. This year, these nurses started to look at children in secondary schools for visual, orthopaedic, skin or emotional problems, to which the attention of the school doctor should be drawn. The numbers of these examinations will be available for next year's report, and this first year's trial certainly proved valuable for the school doctor, and the nurses have enjoyed their new responsibility.

For the year as a whole, however, the number of hygiene inspections carried out by the nursing service was less than the previous year (270,442 compared with 307,670 in 1969). Despite this, the total number of pupils found to be infested showed an increase (8,446 compared with 5,068), a reflection of national findings. Similarly, there was a small but significant increase in the numbers of children found to be suffering from scabies (66 as compared with 51 in 1969). Since these figures are likely to be an underestimate of the true incidence, the need for an increase in the number of nurses (clinic nurses and health visitors) involved in the school health service, is clear.

Chiropody

In the school health service this showed some clarification of purpose and direction during the year; I should like to see screening examination by chiropodists of 10 year old children in the junior school, with treatment of verruca—that common but painful and unpleasant skin condition—in school children of all ages, and it seems we may be able to reach this ideal in the next year or so, as the county establishment of chiropodists increases. The chiropodists may also have time to provide health education in the care of the feet, both on an individual and group basis.

Audiology

Dr. Moody, the county medical audiologist, has taken over responsibility for the county audiology clinics; Sir Alexander Ewing, who had been associated with the development of the audiological services in Cheshire, and whose warmth of personality, dedication to the cause of the hearing-handicapped child, and professional integrity will be loved and remembered by all who worked with him, retired from active involvement in the county service during the year. We shall never forget the services rendered by Sir Alexander Ewing and his wife, Lady (Ethel) Ewing.

Dr. Moody has justified the confidence the health department has had in her abilities. She has been grateful for the continuing support provided by Professor I. G. Taylor and the members of his Department of Audiology. Dr. Moody has continued the system of regular audiology clinics at specified times (attended by either Mr. Stride or Mr. Kodicek, the E.N.T. consultants and by speech therapists, educational psychologists, school medical officers and group advisers), but has been able to add additional sessions whenever a sudden demand appeared, or where there seemed to be an undue waiting list.

Audiology Training

Dr. Moody has taken a major part in the training of various staff. Three courses of instruction have been held for doctors, one of which was for senior staff (to give them additional information on modern audiological techniques, including impedance testing and masking techniques in bone conduction audiometry) and the two others were refresher courses on important basic principles. One initial and two refresher courses for health visitors have been held. Clinic nurses have been trained in “distraction” testing, so that they can be of assistance to health visitors (we were pleased with the clinic nurses’ interest and skill in this testing), and group advisers—those senior health visitors with special responsibility for children with hearing handicaps—were given special attention.

Parents’ Course

In addition, a one-day course was arranged for parents, in co-operation with the two parents’ associations for hearing-handicapped children in the county. A

demonstration of equipment was presented by Dr. Moody and the peripatetic teachers of the deaf; there were some expert and excellent lecturers; and a very successful meeting was concluded by an address from Mr. Hatfield, the assistant director for special services, on the future provision of education facilities within the county for hearing-handicapped children.

Peripatetic Teachers of the Deaf

We were all saddened by the unexpected sudden death of Mrs. Martin. Despite onerous family commitments, she gave of her very best to the service, and brought comfort and assistance to many families.

We were also sorry to lose the service, towards the end of the year, of Mr. T. Harrison, who decided to leave the peripatetic service and to return to the special school system. We wish him happiness and success.

We welcome the newcomers to the service, Mr. McDonagh and Miss Starkie, and hope they will enjoy work in the county peripatetic service. This service continues to provide guidance and training to parents, children and teachers, where there is a hearing handicap of either a severe or partial nature in the child. The complex and skilled nature of the work was well illustrated in Mr. Buckingham's contribution to the annual report in 1967.

In addition, the teachers provide expert advice on educational placement also liaison with the units for partial hearing children in the county, and they are continuing to see those children placed in special schools outside the county.

Speech Therapy Service

A good deal of attention was paid, in meetings with the therapists, to the problem of language disorders, and many discussions were held on the efficiency of the usual methods of treatment for this and other forms of speech disorder.

A full day meeting was arranged for speech therapists and medical officers; Mrs. Byers Brown and Miss Renfrew illustrated with skill and clarity the need for accurate assessment and a clear definition of purpose in the treatment aspects; Dr. Owrid spoke with distinction on "the use of language" and Dr. Keevil, one of the county's psychiatrists, gave an expert view on the emotional aspects of language disorders.

The possibility of inaugurating a system of intensive speech therapy has been discussed. There is evidence of the need for special classes in ordinary schools, where intensive speech therapy could be carried out, without the need for the child to "miss out" educationally. However, it seems that such a special unit may not be provided in the immediate future, in view of the many special educational needs that exist in the county. An alternative might be to provide clinic facilities for intensive therapy, possibly in school holidays.

The numbers of children receiving speech therapy at the end of the year are as follows:

Articulatory disorders—1,305.
Stammering—221.
Cleft palates—50.
Language disorders—421.
Others—17.

(N.B.—A child may suffer from more than one disorder, e.g. articulatory disorder and cleft palate may be associated, as may stammering and language disorders, etc.).

The value of and need for a skilled speech therapist, in work with children showing features of autism, is shown at the county unit for autistic children at Neston.

Mrs. Eaton, the senior speech therapist, has been of immense help to young therapists starting work in the county, on clinical and organisational aspects of the work.

Child Guidance Service

The service continues to develop. A third full-time child psychiatrist, Dr. Strelau, came to work in Cheshire in the autumn of the year. 742 children were seen in child guidance clinics this year; this number, however, is likely to be only a proportion of all the children in the county who show emotional disturbance. One still finds some parents reluctant to attend a child guidance clinic, so that referrals may not be made until the child has reached an age or condition when it is difficult to alter behaviour patterns. Parents find that regular attendance at a clinic is required, when they may have hoped for instant remedy, so that there is a high proportion of irregular or poor attenders at child guidance clinics. However, the integration of the psychological service carried out in 1969 may be of benefit in this respect, in that surveillance of individual cases can be carried out in school and indeed one can say that the integrated service has already shown many benefits.

The social workers in the child guidance service have a vital role to play, and it is pleasing to be able to acknowledge the work of the head psychiatric social worker, Miss Janus, and in particular her guidance and advice to new members of staff.

The psychiatric social workers look forward, as I do, to close co-operation with the new social service department staff next year.

A new adolescent psychiatric unit started at Parkside Hospital during the year, and various members of the child guidance service have taken the opportunity of visiting the unit and meeting the director, Dr. Wells.

Two social workers, Miss Jones and Mr. Huxley, were seconded on the post-graduate diploma course for psychiatric social work; we wish them success in their examination and look forward to their return to the service.

Visual handicaps

A two-day course was arranged on the problems of visual handicaps, at which medical officers and those senior health visitors who have been given special responsibility in this field, attended, together with representatives from the education department. Although the problem of severe visual handicap in children is, numerically, a relatively small one, it is nevertheless a very significant problem, since there are often other associated handicaps, such as physical handicap, hearing loss, intellectual damage. It has been estimated that one-third of the children in schools for the visually handicapped show evidence of significant emotional disturbance.

Health Education

The various commitments in this field are described elsewhere. The one that has taken up a great deal of time has been the collaboration with the education department in the preparation of its new booklet "A new look at health education", embodying many progressive ideas. The B.B.C. films on sex education coincided, rather unfortunately in some ways (because of the unbalanced publicity which was given to these films), with the publication of the booklet. The meetings at various schools in the county, in order to allow opportunity for discussion of the booklet, were interesting and revealing of the differing problems that different schools areas can present.

There is no doubt that information about health is now more widely available than ever before, but it is questionable if we have yet solved the mystery of how to alter or modify human behaviour, even when that behaviour is harmful to the individual; thus, to the "chronic" medico-social problems in adult society of over-indulgence in alcohol, food and tobacco, has been added the abuse of drugs by the youthful members of our society. Discussions were held with the education department and with the chief constable's representatives, on this relatively new problem of drug abuse.

The course for health education for medical officers explored these problems in some depth.

We extended the concept of health education to include instruction in first aid; with Mr. Rossington's enthusiastic co-operation, and the skill and practical expertise of the ambulance training instructors, three courses of instruction have been held for teachers, and I hope that more areas will seek advice and help in this field.

Rubella

This illness, commonly known as German Measles, was thought of as a mild febrile illness of no great consequence, until it became shown, conclusively, that rubella during pregnancy could cause widespread damage to the foetus; in particular, vision, hearing, heart and brain damage.

Recently, a vaccine has become available and the Department of Health and Social Security has asked that girls between 11 and 14 years be offered immunisation.

We were fortunate to have the help of Dr. Tobin, the director of the public health laboratory service, in carrying out a survey of women teachers in the county, in order to determine their immunity status to rubella. With the co-operation of the director of education, women teachers of child-bearing age were asked if they would like this test carried out. The response was excellent, and with the help of the divisional medical officers in the county, 712 teachers were tested, 629 were found to have immunity, and the remainder were offered means of seeking immunisation.

We are indebted to Dr. Tobin for his advice, guidance and co-operation in this very worthwhile undertaking, which may be repeated next year, with the inclusion of other "at risk" groups of women, e.g. the nursing services, day nursery staff, etc.

Special Educational Provision

The continuing development of special educational facilities in the county is very pleasing, and it is stimulating to staff to know that discovered needs can be dealt with. The special classes for educationally retarded children have demonstrated that social and emotional problems as well as educational problems may often be ameliorated by this type of provision. The small school at Pictor House for physically handicapped children has operated very successfully, an unusual but rewarding demonstration of the ability of statutory and voluntary organisations to co-exist.

The need for a major school for physically handicapped children in the county still remains pressing but various difficulties have emerged in the acquisition of a site. As a temporary alternative nine children with severe physical handicaps have been managed at ordinary schools by the provision of extra nursing attendant help. Educationally, this arrangement has much to commend, but the need to provide physiotherapy and frequent medical surveillance for these children remains a problem.

Epilepsy

A report to the central health services council by a joint sub-committee on the health and welfare services for persons suffering from epilepsy (the Reid report) made, inter alia, a plea for placing in ordinary schools, wherever possible, children suffering from epilepsy. A small survey was carried out in the county; we found that 261 children with epilepsy were at ordinary schools, and 19 at special schools. As special educational facilities within the county improves, the numbers who need special school placement should decrease. Our figures are in line with the national incidence of 4-6 persons per 1,000. A major problem for many children with epilepsy (apart from educational difficulties that may arise) is obtaining employment on leaving school especially in a diminishing demand market. This difficulty is in a large part due to widespread ignorance about epilepsy; the vast majority of persons suffering from epilepsy are employed and providing a satisfactory service; it does indeed seem absurd that irregular attendance at work because of a peptic ulcer can be tolerated, but a short 15-30 minutes break because of a fit may put a person's employment in jeopardy.

Careers Advisory Service

These and other handicaps are discussed with the local representatives of the careers advisory service at annual liaison meetings, at which school doctors are also present. We have all welcomed and benefited from the services of Mr. Edmundson, the specialist careers officer.

School Sanitation

I should like to express my particular thanks to the county public health officer for the remarkable survey which he has managed to carry out on county schools in the last two years—we had thought that it might well have taken longer—and which is set out later, defining the objectives and to some extent the order in which they should be attained.

Paediatric Ward Rounds

Dr. J. Allen continues to hold a monthly ward-round at Macclesfield Hospital; arrangements were made this year on the west side of the county, with Dr. K. Llewellyn, who has held monthly ward-rounds at Clatterbridge Hospital. It is obviously most important for school doctors to be kept clinically alert, and the ward rounds are extremely popular in this respect. We are grateful to Dr. Allen and Dr. Llewellyn for their help in this.

Cerebral Palsy Team

Miss Bradley, the occupational therapist, attended the Bobath course of training. Mr. Bedford, the physiotherapist, has undertaken a fair amount of home visiting; this facilitates parental guidance which is so important in the physical and emotional care that parents are required to provide for their handicapped children. Dr. Cargill, the senior school medical officer, retains a close liaison with the team, which continues to operate under the clinical direction of Dr. Allen.

Finally, my grateful thanks to Mr. MacLean and all the staff in the school health section for their unflagging loyalty and enthusiasm.

OPHTHALMIC SERVICE

The year has not been one of notable events in the school ophthalmic service, but the volume of work has continued unabated.

Attention is drawn to the idea that it would be wiser to consider patients with a need for glasses as suffering from a "refractive variation"* rather than a "defect" or "abnormality." The parent frequently enquires "Is the child worse?" at a change of the glasses' strength when the child has been labelled with a defect or abnormality, and it is better that both parent and child should consider long or short-sightedness as variations of the normal rather than as abnormalities (save for a few rare cases of very high degrees of long or short-sightedness).

In 1962 I referred to the problem of firework injuries and the need for preventive ophthalmology. Local publicity has since been given in the county's clinics, and latterly this has been emphasised by the press and radio and I am glad to report a notable diminution in the number of injuries. Similar conditions apply to the case of eclipse burns, where if the patient looks directly at the sun the macula is damaged permanently. Here again publicity has diminished the number of injuries.

The question of squint in its commoner form has been mentioned in earlier reports. The year has seen several cases in which intra-ocular tumours have presented as squints in young children and necessitated removal of the eye. This point again stresses the need for the prompt specialist examination of any child thought to have a squint.

Children are also being seen in larger numbers with squints due to facial injuries following car accidents. These are permanent lesions which need operative cure and underline the desirability of children wearing a satisfactory harness when travelling in cars. In this connection one notes a higher number of infant safety seats fitted to cars and here again preventive ophthalmology has a part. This matter also affects adults, who frequently suffer ocular penetrating injuries which might have been avoided had seat belts been worn.

Orthoptic and operative treatment of squint continue satisfactorily, and my colleagues and I would wish to express our thanks to the work of the orthoptists and of the health visitors and nurses in the clinics on whose efforts the satisfactory follow-up of our patient depends.

SCHOOL DENTAL SERVICE

During the year the dental service has continued to develop along the lines predicted in previous reports. The demand for routine treatment is increasing, and nearly 20,000 children attended at the clinics for examination without being inspected previously in school. This is a 30% increase over a two-year period and a trend which is likely to continue. More patients are returning for routine inspections at six-monthly intervals. Although it is generally accepted and advocated in all dental health education programmes that regular attendance is necessary, the inevitable result of these changes is that fewer children receive school inspections. During 1970, only half the school population was examined in the schools.

Although the overall staffing position has remained generally unchanged there has been a further improvement in productivity and I am grateful to the staff for their continuing efforts. The number of attendances for treatment and the items of

* Health of the School Child 1966-68, p. 61.

treatment carried out have again increased considerably, but with the quite proper emphasis on regular care, the number of children treated has not increased to the same extent.

This situation demonstrates the dilemma of the dental services at the present time. All the teaching hospitals impress on dental students the importance of regular 4 or 6-monthly inspections and treatment, especially for children, the Department of Health and Social Security supports this policy, and health education publicity material carries messages aimed at encouraging the habit of regular attendance. However, the manpower to provide the services required to satisfy this policy does not exist, and many children who would accept treatment are being denied the opportunity to receive regular dental care. This is a national rather than a local problem, related to the overall planning of the training facilities for dental students.

The target of 20,000 dentists for the whole country was set in 1946 by the Teviot Committee. Only recently have the dental schools been expanded to take account of the original recommendations, and it will be a long time before the target is reached. In 1946 there was very little information on which to base the estimate, and a review in the light of current epidemiological knowledge might well arrive at a considerably higher estimate of the number of dentists required. Until the manpower problem is adequately solved there is no prospect of the Authority's being able to meet the obligation to provide a comprehensive dental service.

Under these circumstances the need for effective preventive measures is obvious, and fluoridation of the water supply is established as a basic requirement of any programme to control dental caries. As a first step, routine rinsing with a topical fluoride solution has been introduced. At each visit to the clinic children are given a measured quantity of fluoride solution to rinse round their teeth. Although the effect of this method is not very large, it is a worthwhile attempt to reduce the overwhelming treatment load. A clinical trial is being planned to assess a comprehensive preventive programme suitable for use in the schools.

Even with the use of available preventive measures the need for treatment will exceed the resources and there is a danger that treatment may be restricted to those children whose parents actively seek attention. Therefore, priorities must be established. Although conservation of the deciduous teeth is important and the number filled has increased over recent years, the main objective is to ensure that as many children as possible leave school with a reasonable adult dentition and with an intention to continue to seek routine dental care. First priority has to be given to the permanent teeth of older children even if it means ignoring the needs of younger children.

Dental Health Education

The principal aim of the dental health education effort has been to encourage the schools to include the topic in all health education programmes, and dental health is being included in in-service training schemes for teachers. A number of schools have undertaken project work where the children have clearly enjoyed finding out for themselves about dental health. This approach seems to be more promising than the traditional formal methods, but there is some doubt about the value of telling young children how to care for their teeth without involving their parents. To assist the dental staff in discussing the subject with groups of parents, a short study course has been held which dealt with some of the problems of communication and behaviour formation as well as the nature of the advice to be offered.

Rural Areas

The mobile dental clinic has now been in use for a full year and has proved its value. Children in some of the rural schools in S.W. Cheshire are obtaining a high standard of routine care which has not been available before. The demand has been higher than anticipated, and it has not been possible to cover the whole of the area which would benefit from this service. It is hoped that it may be possible to obtain another mobile clinic in the future.

CAREERS ADVISORY SERVICE

Liaison meetings are held regularly throughout the county to assist the placing of school leavers in employment. The appropriate careers employment officers, school medical officers and senior school medical officers attend, and also divisional medical officers, head teachers, child care officers and representatives of voluntary societies where this is indicated. Any child whose employment or after-care may constitute a problem is discussed; the meetings are invaluable for promoting good working relationships and understanding, and also the most efficient and beneficial outcome possible for the child.

SPECIAL SCHOOLS **(County Education Committee)**

Grappenhall Hall School

This School has 100 places for educationally sub-normal boys, generally within the I.Q. range of 55-75 aged 8-16 years, who suffer from difficulties such as poor environment, maladjustment or an additional physical or sensory handicap.

The progress of the boys is kept under constant review and those who prove to be unsuitable are excluded. At the other end of the scale a watch is constantly kept for the boy who makes exceptionally good progress which may justify his re-entry to an ordinary school. As a result of this constant review, there is an indication that the majority of boys remaining at the school to the age of 16 years will be able to take up employment.

The school was fully occupied all year, during which there were 19 new admissions taking the places of children discharged.

One of the county speech therapists made visits to the school during the year to help pupils with speech defects, and one of the senior peripatetic teachers of the deaf also made regular visits.

The school dental surgeon visited regularly and carried out any treatment necessary.

Capenhurst Grange School

Extensive building alterations were completed during 1970, and the accommodation increased from 38 to 75. During the year 34 girls were admitted and at the end of the year, 65 were resident.

The school dental surgeon visited regularly and carried out necessary treatment.

Torpenhow Open-air School

The school accommodates 50 children in the age range 7-11 years and priority for admission is given to cases of asthma, bronchitis and bronchiectasis.

Children suitable for admission are selected by the school medical officers at medical inspections and enter Torpenhow Open-Air School initially for a period of at least two terms, this being extended if necessary.

A speech therapist visits the school for one session weekly, and a physiotherapist attends twice weekly.

The children were seen regularly by the school dental officer and the necessary treatment was carried out.

During the year 5 children from another authority attended this school and altogether 52 children were admitted and 51 were discharged. They were classified according to their various disabilities as follows:

							ADMISSIONS		DISCHARGES	
							Boys	Girls	Boys	Girls
Asthma	...	...	...	...	...	...	4	—	7	2
Asthma and eczema	...	...	...	...	...	...	2	—	6	—
Bronchitis	...	...	...	...	...	...	4	4	4	4
General debility	...	...	...	...	...	...	9	3	11	7
E.S.N.	...	...	...	...	...	...	—	1	—	1
Congenital heart defect	...	...	...	...	...	...	—	—	—	1
Maladjusted	...	...	...	...	...	...	—	1	3	—
Behaviour problems	...	...	...	...	...	...	4	—	3	—
General debility and speech defect	...	...	...	...	...	...	1	1	1	—
Spina bifida	...	...	...	...	...	...	—	1	—	—
Ectopia vesicae	...	...	...	...	...	...	—	1	—	—
General debility and urinary infection	...	...	...	...	...	...	—	1	—	—
Bronchiectasis	...	...	...	...	...	...	1	—	—	—
Emotionally deprived	...	...	...	...	...	...	2	—	—	—
Behaviour problems and encopresis	...	...	...	...	...	...	1	—	—	—
Behaviour problems and E.S.N.	...	...	...	...	...	...	2	—	—	—
Maladjusted and E.S.N.	...	...	...	...	...	...	1	—	—	—
Enuresis	...	...	...	...	...	...	1	—	—	—
Low I.Q. and speech defect	...	...	...	...	...	...	1	—	—	—
Low I.Q. and hearing defect	...	...	...	...	...	...	1	—	—	—
Kugelberg Welander syndrome and obesity	...	...	...	...	...	...	1	—	—	—
General debility and behaviour problems	...	...	...	...	...	...	1	—	—	—
Cardiac lesion and behaviour problems	...	...	...	...	...	...	1	—	—	—
Imperforate anus	...	...	...	...	...	...	1	—	—	—
Asthma and urinary infection	...	...	...	...	...	...	—	1	—	—
Encopresis	...	...	...	...	...	...	—	—	—	1
							38	14	35	16

ENVIRONMENTAL HEALTH

School Sanitation

Responsibility for public health and food hygiene inspections of schools throughout the county was transferred in 1968 from the school medical officers to the county public health officer. As a result of this a comprehensive survey of all county schools was commenced early in 1969 and completed by the end of 1970. Following this it is hoped that in future a routine inspection will be carried out at each school annually.

The initial survey involved the inspection of one nursery school, 529 primary schools and 117 secondary schools totalling 647 schools. Reports were compiled as each division was completed and these were submitted both to the director of education and to the county architect. The director of education has indicated his satisfaction with this method of reporting and confirms that it will help him to establish priorities when modernisation schemes are being considered, also when more money is available in the minor capital works allocations.

Legal standards are provided by the Standards for School Premises Regulations 1959, and the Food Hygiene (General) Regulations 1970. In addition to the reports indicating how each school measures up from a public health standpoint, deficiencies and other contraventions of the regulations together with other items regarded as requiring early attention are underlined.

Inspections are of a general nature covering all aspects of public health and food hygiene. However, in this initial survey particular attention was paid to:

1. Sanitary accommodation.
2. Hand-washing facilities.
3. Food hygiene in connection with the school meals service.
4. Dining facilities.

By this method it is hoped that a uniform public health standard of premises and equipment will be achieved throughout the county.

The Standards for School Premises Regulations 1959

These cover all aspects of school premises dealing particularly with sanitary accommodation and hand-washing facilities. The aim must be to provide modern internal sanitary accommodation with adjacent wash-hand basins for both staff and pupils at all schools.

External sanitary accommodation is not "condemned" by the regulations, but it is apparent that this accommodation is bound to suffer from exposure to frost in the winter, leading to a marked deterioration in conditions, and on occasions to the accommodation becoming completely unusable. Another inherent disadvantage is that children crossing the school yard and using the accommodation can be affected by the cold and, during inclement weather, by rain or snow. This could lead to the children being discouraged from using the accommodation at the proper time.

As an interim measure, and provided that no modernisation scheme is envisaged within the foreseeable future, it is considered that as a minimum all external accommodation should be protected from frost by the provision of suitable space heating, and urinals and access passages to w.c. compartments should be roofed over. Artificial lighting should also be provided.

The Food Hygiene (General) Regulations 1970

For county administrative purposes, meals premises at schools are classified either as "Type A" or "Type B". A Type A kitchen is one where the meals are prepared and served on the premises. Type B is a kitchen which receives bulk cooked food in insulated containers, normally from a central kitchen, service of the meals and washing up thereafter taking place at the school. In total there are 483 Type A, 150 Type B and 10 Central Kitchens.

The aim obviously must be to provide Type A kitchens at as many schools as possible.

The standard of cleanliness at school premises is generally very high, and with the exception of matters of construction and equipment at some premises the food hygiene standards are also very high.

The "County Code for Food Premises" aims at regularising the layout, equipment and structural standards for county premises. This code is currently being prepared as a joint project by the county architect's, education and health departments and when this code is completed the existing "county" standard which complies with all statutory requirements should be clearly defined.

General Observations and Statistics

The following tables of statistics summarise the results of the initial survey, highlighting the major public health problems and indicating in the case of school meals provision, whether minor or major modernisation scheme are required to bring the premises up to the "county" standard. Generally the situation at primary schools is much worse than at secondary.

The Standards for School Premises Regulations 1959

Statistical Summary, Sanitary Accommodation and Hand-washing facilities at County Schools

Divisional Executive	No. of Schools	No. of Pupils	SCHOOL (Main Structure) BUILT				Staff				SANI
			Pre- 1900	1900-19	1920-45	1946-70	Internal	Annexed	Internal and ex- ternal	External	
1	30	10,619	4	7	8	11	27	—	—	3	
2	36	11,080	7	6	3	20	32	—	1	3	
3	55	13,782	23	4	6	22	39	—	2	14	
4	31	9,788	4	7	4	16	28	—	—	3	
5	38	13,626	5	4	8	21	35	1	2	—	
6	43	14,946	7	3	5	28	39	—	—	4	
7	47	15,449	6	7	3	31	44	1	1	1	
8	29	8,104	10	6	3	10	27	—	1	1	
9	25	6,847	12	3	3	7	21	1	2	1	
10	52	11,461	22	6	3	21	38	1	1	12	
11	34	8,755	14	2	4	14	24	2	2	6	
12	63	16,461	25	7	2	29	53	1	3	6	
13	31	9,502	13	7	3	8	19	2	3	7	
14	36	6,766	27	4	—	5	18	—	—	18	
15	66	18,739	17	6	6	37	54	—	1	11	
16	14	2,677	6	1	—	7	11	—	—	3	
17	17	2,309	12	1	1	3	11	—	1	5	
Totals	647	180,911	214	81	62	290	520	9	20	98	

TARY ACCOMMODATION

Pupils

Internal	Annexed	Internal and ex- ternal		Pail Closets still in use	Gross Defic- iencies Pupils	Shared by Staff/ Pupils	HAND-WASHING FACILITIES		Gross Defic- iencies (Pupils)	Washbasins Lacking Hot Water	
		Internal	Ex- ternal				Not Adjacent to Sanitary Accommodation	Pupils		Staff	Pupils
14	3	4	9	—	2	—	1	13	5	3	8
24	1	6	5	—	2	—	3	10	9	—	5
27	—	9	19	1	—	9	14	24	10	4	16
19	3	—	9	—	4	—	2	12	3	1	2
22	6	8	2	—	2	2	1	10	5	2	4
31	5	—	7	1	1	2	3	9	6	2	4
32	3	7	5	—	8	2	4	8	11	2	5
10	2	8	9	—	3	—	3	11	11	—	2
6	4	4	11	—	1	—	2	16	7	6	9
25	1	4	22	2	2	12	14	25	18	3	7
15	3	8	8	—	1	6	3	12	4	1	2
31	3	13	16	—	5	9	12	25	16	6	13
10	4	5	12	—	2	—	7	20	11	4	7
10	—	2	24	—	—	1	17	23	6	3	4
35	3	8	20	—	6	9	10	20	11	—	7
11	—	—	3	—	1	4	3	3	2	—	1
8	1	3	5	—	1	4	5	9	2	—	5
330	42	89	186	4	41	60	104	250	137	37	101

The Food Hygiene (General) Regulations 1970

Statistical Summary of Kitchen and Dining facilities

Divisional Executive Number	TYPE 'A' KITCHENS* PREMISES					TYPE 'B' KITCHENS† PREMISES				
	Number	Satis- factory	Require Modernisation		No. of Meals prepared	Number	Satis- factory	Require Modernisation		
			Minor	Major				Minor	Major	
1	22	—	14	8	7249	6	4	2	—	
2	31	7	15	9	9981	7	1	4	2	
3	43	5	28	10	8745	10	—	6	4	
4	24	—	15	9	8206	3	—	2	1	
5	32	12	12	8	8617	9	4	4	1	
6	38	3	24	11	11997	3	—	1	2	
7	40	9	24	7	12095	5	3	2	—	
8	15	4	9	2	3990	13	5	4	4	
9	17	4	6	7	4255	6	5	1	—	
10	37	13	16	8	8352	14	3	9	2	
11	28	5	16	7	6297	7	3	3	1	
12	50	20	17	13	10973	14	5	4	5	
13	12	7	2	3	2667	17	8	6	3	
14	23	4	7	12	3108	12	1	7	4	
15	52	21	18	13	12200	12	5	3	4	
16	8	6	2	—	1686	6	2	1	3	
17	11	5	5	1	1050	6	1	2	3	
Totals	483	125	230	128	121468	150	50	61	39	

* Type 'A' is a kitchen where meals are prepared and served on the premises

† Type 'B' is a kitchen which receives bulk cooked food in insulated containers.

No. of Meals Served	CENTRAL KITCHENS PREMISES				No. of Meals prepared	DINING FACILITIES MEALS TAKEN IN			
	Number	Satisfactory	Require Modernisation Minor	Major		Dining Room	Hall	Class- rooms	Rented Premises
728	—	—	—	—	—	19	10	1	—
1078	—	—	—	—	—	21	16	1	2
875	—	—	—	—	—	22	28	5	—
153	1	—	—	1	910	14	13	4	—
1536	1	—	—	1	1400	22	19	1	1
188	—	—	—	—	—	28	13	2	—
647	—	—	—	—	—	23	24	—	1
1785	1	—	—	1	1000	7	18	4	—
735	—	—	—	—	—	18	7	—	2
1253	1	—	1	—	1500	19	23	11	—
702	1	—	—	1	1240	14	17	3	3
1534	1	—	—	1	700	25	30	8	1
2144	1	—	—	1	1400	9	14	5	4
1168	1	1	—	—	1662	10	11	12	2
965	1	1	—	—	965	28	28	11	—
461	1	—	—	1	537	3	6	4	1
370	—	—	—	—	—	3	8	6	—
16322	10	2	1	7	11314	285	285	78	17

From these tables, the unsatisfactory conditions may be summarised as follows:

1. Sanitary Accommodation

It will be noted that only 4 small primary schools now have pail closets, which is a much improved situation compared with that obtaining a few years ago. One of these is to be provided with modern waterborne sanitation during the coming year, another of the schools is included in the programme for replacement schools and the future of the remaining two schools is uncertain.

		Internal and external	External	Shared by staff and Pupils	Gross * deficiencies
Staff:	Primary Schools	16	98	60	—
	Secondary Schools	4	—	—	—
	TOTAL	20	98	60	—
Pupils:	Primary Schools	66	179	—	15
	Secondary Schools	23	7	—	26
	TOTAL	89	186	—	41

2. Hand-Washing Facilities

		Not adjacent to san. accomm.	Gross* deficiencies	Lacking hot water
Staff:	Primary Schools	103	—	29
	Secondary Schools	1	—	8
	TOTAL	104	—	37
Pupils:	Primary Schools	223	99	89
	Secondary Schools	27	38	12
	TOTAL	250	137	101

*Gross deficiencies: i.e. more than 25% deficient in number of fittings as required by regulations.

3. Food Hygiene, School Meals Service

150 schools still have Type B kitchens. Although this is an improvement on the situation when a survey was carried out in 1956-7 much still remains to be done to establish more Type A kitchens. There are still 37 of these Type B which are situated in the pupils' washrooms, cloakrooms or passageways. This is regarded as grossly unsatisfactory.

At 17 schools the kitchen and dining accommodation is in rented buildings and is shared with other organisations. This presents particular problems and separate county premises should be provided.

85 Type A kitchens and 4 central kitchens are situated in prefabricated H.O.R.S.A. buildings which were erected at the inception of the school meals service during the war years. These structures have inherent basic defects which render them sub-standard.

It is considered that the following modernisation schemes are required:

Type of premises	Modernisation schemes required	
	Minor	Major
Type A kitchens	230	128
Type B kitchens	61	38
Central kitchens	1	7

At 7 of the kitchens requiring major modernisation schemes, serious overcrowding and congestion are additional public health hazards.

4. Dining Facilities

In 78 schools pupils have to eat their meals at their desks, and this again is regarded as sub-standard provision.

Conclusion

From this report it will be seen that a great amount of work is necessary to bring the county schools generally to the required public health standard. The only solution would appear to be the provision of adequate finance to permit a phased programme to be carried out over a period of years, otherwise there is a danger that very unsatisfactory conditions will continue for many years.

Milk in Schools Scheme

The full impact of the central government decision to supply milk only to primary school children has now been felt. In 1967-68, the last complete year when all school children received milk under the provisions of the scheme, 50 million gallons of liquid milk were supplied to schools in England and Wales. In 1969-70 this had fallen to 34 million gallons. This figure will be further reduced from September 1971 when only infant children will be supplied. From a public health point of view, it is considered that the 'milk in schools' scheme has played an important part in improving the health of the children of the nation, and hence of the nation itself. For this reason one regrets these curtailments of the scheme.

It is pleasing to note, however, that the county has recommenced supplying milk to children attending non-maintained schools.

Any new supply of milk proposed for a particular school is first referred by the director of education to the health department for approval. As will be seen from the table at the end of this report only two of the schools in the county are supplied with 'untreated' (raw) milk. These are two isolated schools involving 48 pupils. It appears that under present circumstances, and owing to the rural nature of these schools, a supply of untreated milk will have to be accepted for the present.

Pasteurised milk is of course a 'safe' milk from the bacteriological standpoint, whereas untreated (raw) milk can be, and from time to time is, found to be infected with pathogenic organisms, particularly *brucella abortus*.

With these factors in mind the sampling frequency is as follows:

- (a) Schools receiving a supply of pasteurised milk—a maximum of twice yearly.
- (b) Schools receiving a supply of untreated (raw) milk—monthly samples from the school and a monthly dealer (herd) sample from the two herds involved.

No school in the county was without a supply of liquid milk at any time during the year.

During 1970 sampling of all school milk supplies throughout the county continued, all samples being collected in the course of retail delivery. A total of 853 samples was collected as compared with 1,003 in 1969. All the schools in the administrative county are sampled by the county health department with the exception of the 23 primary schools in the area of the Crewe borough council. Here the borough health department carries out regular school milk sampling by arrangement with the county health department and notifies all results.

It will be noted that 44 samples of pasteurised milk failed the methylene blue test (for cleanliness and keeping quality). With the exception of one supplier these failures were fairly uniformly spread. During extensive alterations to one of the large "county" dairies, school milk was obtained from a processing dairy outside the county which is operated by the same company. It was this source which caused the trouble. The dairy alterations were completed as quickly as possible, these arrangements were discontinued and the trouble was resolved.

The efficiency of the washing of school milk bottles at the dairies licensed by the county council was checked by the collection of 158 washed school bottles from these dairies when the sampling officers were visiting for the purpose of other sampling. All the bottles submitted for examination were reported as satisfactory with the exception of 11 which were reported as being fairly satisfactory and 10 which were unsatisfactory.

The 21 "untreated" (raw) milk samples were also subjected to brucella cultural and biological examination for brucellosis and tuberculosis and all these proved negative as also 10 dealer samples and 9 group samples from the two herds involved.

It is thus seen that a considerable amount of work is carried out to try to ensure that each day, while the schools are open, the whole of the 103,200 or so pupils who take school milk receive a food which is clean and free from all pathogenic organisms and is delivered in clean undamaged containers.

Tables are given below showing the sampling which was carried out during 1970 and the results of such sampling, also the position regarding school milk supplies at the end of the year.

School Milk Samples and Examinations 1970

Type of milk	Total samples Collected	Phosphatase test		Methylene blue test*	
		Pass	Failed	Pass	Failed
Pasteurised	832	419	—	735	44
Untreated	21	—	—	21	—
Total	853	419	—	756	44

*The methylene blue test was void in 53 cases owing to high atmospheric shade temperature.

At the end of 1970 the position in the county regarding school milk supplies could be summarised as follows:

	Schools sampled by County Council		Schools sampled by Crewe M.B.		No. of children supplied†	
	No. of suppliers	No. of schools	No. of suppliers	No. of schools	Total	Percentage
Pasteurised	30	568*	1	23	103,168	99.95 %
Sterilised	2	2	—	—	48	0.05 %
Total	32	570	1	23	103,216	

* Includes 59 non-maintained schools.

† Figures obtained from a census taken on a selected day in September 1970.

School Swimming Pools, 1970

Bathing facilities for school children are provided at public pools, at privately-owned pools or at school pools. The public and private pools are supervised by the appropriate district council, but in the case of school pools these are supervised by the county staff.

The advantages of having a school pool are obvious and the very high proportion of children who can swim at the schools which have their own facilities speaks for itself.

There are now twelve schools in the county with their own pools. Schemes to build three further learner pools are well advanced.

The current policy with regard to learner swimming pools at primary schools was decided by the Finance and General Purposes Sub-Committee, on 15th September, 1969, when it was agreed that all proposals for the provision of learner swimming pools at primary schools would be considered on their merits subject to certain conditions, including approval by the county medical officer.

Regular routine visits by the county public health staff were made in 1970 during the period when the pools were in use.

Samples for bacteriological examination were taken and submitted to the Public Health Laboratory Service for examination. Normally three samples were taken on each occasion, one each from the inlet, outlet and centre sections of the pools.

A total of 273 water samples was taken during 1970; this is approximately the same level of sampling as in previous years. Only one of the total samples submitted was unsatisfactory, although 7 samples were reported as having a high plate count. The overall picture was satisfactory. Difficulties with regard to water condition arise from time to time, but are usually resolved very rapidly.

No outbreaks of illness or foot infection or other conditions associated with the use of swimming pools have been reported at schools having or using school pools.

MEDICAL INSPECTION RETURNS

Year ended 31st December 1970

PART I

Medical Inspection of Pupils attending Maintained Primary and Secondary Schools

TABLE A—PERIODIC MEDICAL INSPECTIONS

Age Group Inspected (by year of birth)	Number Inspected	Physical Condition of Pupils Inspected		Pupils found to require treatment (excluding dental diseases and infestation with vermin)		
		Satisfactory	Unsatisfactory	For Defective Vision (excluding Squint)	For any other Condition recorded in Part II	Total Individual Pupils
1966 and later	1974	1973	1	48	254	281
1965	9219	9211	8	250	1192	1337
1964	7160	7154	6	144	783	873
1963	2828	2821	7	82	314	372
1962	1213	1212	1	65	109	158
1961	703	703	—	53	58	102
1960	934	934	—	65	67	129
1959	1143	1143	—	81	108	168
1958	2039	2039	—	178	170	328
1957	1110	1110	—	110	98	197
1956	1183	1183	—	98	90	173
1955 and earlier	3629	3627	2	270	196	412
TOTAL	33135	33110	25	1444	3439	4530

The physical condition of 99.92 per cent of the total number of pupils examined at periodic inspections was considered satisfactory.

TABLE B—OTHER INSPECTIONS

Number of Special Inspections	...	...	...	...	...	...	528
Number of Re-Inspections	...	...	...	...	...	...	7113
						Total	7641

TABLE C
INFESTATION WITH VERMIN

(i) Total number of individual examinations of pupils in schools by the school nurses or other authorised persons	...	...	...	...	270422
(ii) Total number of individual pupils found to be infested	...	...	...	...	8446
(iii) Number of individual pupils in respect of whom cleansing notices were issued (Section 54 (2), Education Act, 1944)	...	...	...	...	3455
(iv) Number of individual pupils in respect of whom cleansing orders were issued (Section 54 (3), Education Act, 1944)	...	...	...	...	768

PART II

Defects found by Periodic and Special Medical Inspections during the year

				PERIODIC INSPECTIONS				SPECIAL INSPECT- IONS
DEFECTS OR DISEASES				Entrants	Leavers	Others	Total	
Skin	T			306	57	90	453	7
	O			452	42	89	583	10
Eyes:								
(a) Vision ...	T			602	363	479	1444	62
	O			1354	214	498	2066	71
(b) Squint ...	T			403	14	45	462	9
	O			375	21	45	441	11
(c) Other	T			43	6	11	60	5
	O			78	9	17	104	4
Ears:								
(a) Hearing ...	T			173	13	19	205	16
	O			1145	38	118	1301	55
(b) Otitis Media	T			129	8	9	146	2
	O			379	10	39	428	6
(c) Other	T			62	2	5	69	—
	O			86	—	5	91	3
Nose & Throat ...	T			496	35	60	591	12
	O			1261	57	152	1470	16
Speech	T			321	10	35	366	17
	O			727	4	43	774	12
Lymphatic Glands	T			11	2	1	14	—
	O			208	4	22	234	3
Heart	T			51	2	6	59	2
	O			295	16	58	369	25
Lungs	T			167	20	49	236	6
	O			489	50	127	666	44
Developmental:								
(a) Hernia ...	T			49	2	4	55	—
	O			70	—	6	76	1
(b) Other ...	T			73	5	26	104	—
	O			361	2	48	411	14
Orthopaedic:								
(a) Posture ...	T			12	5	9	26	0
	O			56	5	41	102	7
(b) Feet	T			268	17	54	339	8
	O			352	18	63	433	6
(c) Other	T			118	20	19	157	11
	O			181	24	50	255	14
Nervous System:								
(a) Epilepsy ...	T			27	9	5	41	3
	O			57	9	16	82	13
(b) Other ...	T			16	8	11	35	3
	O			173	22	61	256	12
Psychological:								
(a) Development	T			16	6	11	33	6
	O			377	27	103	507	42
(b) Stability ...	T			41	12	22	75	6
	O			706	23	152	881	32
Abdomen	T			59	18	19	96	2
	O			141	14	59	214	10
Other	T			189	28	58	275	8
	O			547	26	98	671	37

T—Requiring Treatment

O—Requiring Observation

PART III

Treatment of Pupils attending Maintained Primary and Secondary Schools

TABLE A—EYE DISEASES, DEFECTIVE VISION AND SQUINT

	Number of cases known to have been dealt with
External and other, excluding errors of refraction and squint ...	295
Errors of Refraction (including squint)	11766
Total ...	12061
Number of pupils for whom spectacles were prescribed	3668

TABLE B—DISEASES AND DEFECTS OF EAR, NOSE AND TROAT

	Number of cases known to have been treated
Received operative treatment:	
(a) for diseases of the ear	75
(b) for adenoids and chronic tonsilitis	308
(c) for other nose and throat conditions	72
Received other forms of treatment	238
Total ...	693
Total number of pupils in schools who are known to have been provided with hearing aids:	
(a) in 1970	33
(b) in previous years	156

TABLE C—ORTHOPAEDIC AND POSTURAL DEFECTS

(a) Number of pupils known to have been treated at clinics or out-patient departments	624
(b) Pupils treated at school for postural defects	—
Total ...	624

TABLE D—DISEASES OF THE SKIN

(excluding uncleanliness, for which see Part I, Table C)

	Number of cases known to have been treated
Ringworm—(a) Scalp	—
(b) Body	—
Scabies	66
Impetigo	40
Other skin diseases	265
Total ...	371

TABLE E—CHILD GUIDANCE TREATMENT

Number of pupils receiving treatment at Child Guidance Clinics ...	742
--	-----

TABLE F—SPEECH THERAPY

Pupils treated by speech therapists	1957
--	------

TABLE G—OTHER TREATMENT GIVEN

Pupils with Minor Ailments	2056
Pupils who received B.C.G. vaccination	13489
U.V.L. treatment	182
Total ...	15727

PART IV

Dental Treatment carried out by the Authority

Attendances and Treatment	Ages 5 to 9	Ages 10 to 14	Ages 15 and over	Total
First visit	16963	12065	2148	31176
Subsequent visits	24758	25139	5112	55009
Total visits	41721	37204	7260	86185
Additional courses of treatment commenced	3015	1887	340	5240
Fillings in permanent teeth	16279	29102	7277	52658
Fillings in deciduous teeth	20449	1373	—	21822
Permanent teeth filled	12440	23116	6426	41982
Deciduous teeth filled	18163	1122	—	19285
Permanent teeth extracted	1662	5825	1009	8496
Deciduous teeth extracted	18354	5359	—	23713
General anaesthetics	6289	2967	312	9568
Emergencies	2755	1219	25	4189
Number of pupils X-rayed ... ..	...	...	...	3011
Prophylaxis ... ..	...	...	...	12812
Teeth otherwise conserved ... ..	...	...	...	1466
Number of teeth root filled ... ..	...	...	...	154
Inlays ... ..	...	...	...	23
Crowns ... ..	...	...	...	189

Orthodontics

New cases commenced during year	469
Cases completed during year	267
Cases discontinued during year	44
Number of removable appliances fitted	588
Number of fixed appliances fitted	41
Pupils referred to Hospital Consultant	65

Dentures

	Ages 5 to 9	Ages 10 to 14	Ages 15 and over	Total
Pupils supplied with F.U. or F.L. (first time)	—	3	3	6
Pupils supplied with other dentures (first time)	5	64	33	102
Number of dentures supplied	7	78	41	126

Anaesthetics

General anaesthetics administered by Dental Officers	1774
--	-----	-----	------

Sessions

Treatment	...	...	...	...	...	...	...	...	13016
Inspection	...	...	...	...	...	...	...	...	890
Dental health education	...	...	...	...	...	...	...	...	213
Administration	...	...	...	...	...	...	...	...	383

Clinics

FIXED				MOBILE		
With 1 Surgery	With 2 or more Surgeries	Total available	In use	No. of Available	Clinics In use	Sessions Worked
42	15	73	69	1	1	231

NUMBER OF HANDICAPPED PUPILS EXAMINED IN SCHOOL

Defect	Number of	
	New Cases	Re-exams
Blind ...	...	...
Partially Sighted	4	13
Deaf ...	2	1
Partially Hearing	4	30
Delicate	14	34
Diabetic	4	8
E.S.N.	17	171
Epileptic	14	24
Maladjusted	4	10
Physically Handicapped	28	107
Speech Defect	—	2

MISCELLANEOUS EXAMINATIONS

Medical Examinations at School Clinics	...	...	...	5254
Number of children examined for part-time employment	...	...	...	272
Number of Special Reports completed on children examined at:				
Schools	...	...	...	133
School Clinics	...	...	...	321
Homes of pupils	...	...	...	191
				<hr/> 645 <hr/>

ATTENDANCES OF SCHOOL CHILDREN AT COUNTY CLINICS 1970

Ear, nose and throat (12)	...	...	...	...	...	...	1760
Ophthalmic (45)	...	...	...	...	...	...	13008
Paediatric (3)	...	...	...	...	...	...	284
Child guidance (12)	...	...	...	...	...	...	5688
Audiology (8)	...	...	...	...	...	...	1953

**NUMBER OF CHILDREN OF SCHOOL AGE
ON CLINIC REGISTERS, 31.12.70**

Cerebral palsy (5)	...	...	...	...	...	...	553
Speech therapy (40)	...	...	...	...	...	...	1709

HANDICAPPED CHILDREN, 1969-70

On Registers of Special Schools

								Boys	Girls	Total
Blind	...	...	...	...	...	...	...	34	14	48
Partially sighted	...	...	...	...	...	...	...	11	7	18
Deaf	...	...	...	...	...	...	...	53	55	108
Partially hearing	...	...	...	...	...	...	...	21	20	41
Delicate, etc.	...	...	...	...	...	...	...	45	16	61
Educationally subnormal	...	...	...	...	...	...	...	120	77	197
Physically handicapped	...	...	...	...	...	...	...	64	57	121
Maladjusted	...	...	...	...	...	...	...	100	20	120
Epileptic	...	...	...	...	...	...	...	12	8	20
Speech defect	...	...	...	...	...	...	...	3	3	6
Total										740

Resident at Further Education Centres

								Boys	Girls	Total
Physically Handicapped	...	...	...	...	...	...	...	5	10	15
Blind	...	...	...	...	...	...	...	3	—	3
Deaf	...	...	...	...	...	...	...	1	—	1

* Number of Clinic Centres in brackets

PERIPATETIC TEACHING OF THE DEAF

Number of children seen	...	...	...	...	...					3290
At clinics	...	...	...	...	...	...	2289			
At school	...	...	...	...	...	...	750			
At home	...	...	...	...	...	...	251			
New cases admitted	...	...	...	...	...	...				241
New cases seen but not admitted	...	...	...	...	...	...				82
Total clinic sessions	...	...	...	...	...	...				979
Discharges	...	...	...	...	...	...				238
Hearing aids issued	...	...	...	...	...	...				33
Medresco (N45)	...	...	...	...	...	...		8		
Post-aural Medresco	...	...	...	...	...	...		21		
Commercial	...	...	...	...	...	...		4		
Children with aids left school	...	...	...	...	...	...				12
Ceased using aids	...	...	...	...	...	...				3

SPEECH THERAPY

Categories under treatment 31.12.70:

Articulatory disorders	...	...	...	...	...	...	...	1301
Stammerers	...	...	...	...	...	...	...	222
Clef palates	...	...	...	...	...	...	...	50
Language disorders	...	...	...	...	...	...	...	425
Others	...	...	...	...	...	...	...	17

Index

Ambulances	59	Maternal Mortality	14
Ante-Natal Clinics	85	Mental Health	31, 87
Area	13	Mental Welfare Officers	35
Attachment	25	Midwives	86
Audiology	100	Milk Supply	45, 117
Badges, Car	89	Ministry of Health Enquiries ...	54
B.C.G. Vaccination	73	Nursing Equipment	81
Births	13	Nursing Homes	27
Blind, Welfare of the	41	Nursing Services	25
Brucellosis	52	Occupational Health	69
Building Programme	14	Old People, Homes for	27
Centres, Clinic	26, 85, 86	Ophthalmic Service	105
Cervical Cytology	87	Parentcraft	27
Child Guidance	102	Perinatal Deaths	14
Child Health	17	Phenylketonuria	18
Chiropody	81, 100	Population	13
Computer	73	Post-Natal Clinics	85
Congenital Malformations	87	Premature Infants	85
Day Minders	19, 85	Private Nurseries	19, 85
Day Nurseries	19, 85	Property, Alterations to	89
Deaf, Welfare of the	42	Ratcable Value	13
Deaths	13, 89	Recuperative Convalescence ...	81
Dental Care	21, 85, 105, 123	Research	77
Developmental Screening	17	Sewerage and Sewage Disposal ...	54
Disabled Persons, Homes for	27	School Health	97, 120
Environmental Health	45, 109	School Hygiene	110
Epilepsy	104	School Swimming Pools	119
Family Planning	89	Special Schools	103, 107
Fluoridation of Water	54	Speech Therapy	101, 125
Genetic Counselling	17	Staff	3
Geriatric Clinics	89	Statistics, County District	127
Handicapped Persons	39	Stillbirths	13
Health Centres	25	Training, Nurse	26
Health Education	63	Training Centres	33, 87
Health Visitors	86	Tuberculosis	91
Home Help	81, 86	Unmarried Mothers	20
Home Nursing	86	Urban Programme	20
Hostels	32	Vaccination and Immunisation	73, 88, 103
Illegitimate Children	20	Vision Testing	100
Infantile Mortality	13, 91	Water Supply	54
Infectious Diseases	89, 92	Vital Statistics	13

COUNTY DISTRICT STATISTICS
1970

TABLE A

Deaths by Causes.—Sex—

Live Births, Stillbirths, Deaths under 1 yr., 4 wks., 1 wk.

Live Birth Rate, Stillbirth Rate, Infantile Mortality, Perinatal
Mortality, Death Rate

Population, Area—

■ Each County District

TABLE B

Deaths by Causes.—Sex ; Age—

■ Urban Districts, Rural Districts

CAUSES OF DEATH						Altrincham M.B.		Bebington M.B.	
						M	F	M	F
B4	Enteritis and other diarrhoeal diseases	...	...	...	...	—	1	—	—
B5	Tuberculosis of respiratory system	...	...	...	...	—	—	1	1
B6 (1)	Late effects—pulmonary tuberculosis	...	...	...	...	—	—	2	—
B6 (2)	Other tuberculosis	...	...	...	...	—	—	—	—
B11	Meningococcal infection	...	...	...	...	—	—	—	—
B14	Measles	...	...	...	...	—	—	—	—
B17	Syphilis and its sequelae	...	...	...	...	—	—	—	—
B18	Other infective and parasitic diseases	...	...	...	...	—	—	—	2
B19 (1)	Malignant neoplasm, buccal cavity, etc.	...	...	...	...	2	—	1	—
B19 (2)	Malignant neoplasm, oesophagus	...	...	...	...	1	—	2	4
B19 (3)	Malignant neoplasm, stomach	...	...	...	...	11	3	17	5
B19 (4)	Malignant neoplasm, intestine	...	...	...	...	4	11	9	7
B19 (5)	Malignant neoplasm, larynx	...	...	...	...	1	1	1	—
B19 (6)	Malignant neoplasm, lung, bronchus	...	...	...	...	16	3	29	7
B19 (7)	Malignant neoplasm, breast	...	...	...	...	—	8	—	12
B19 (8)	Malignant neoplasm, uterus	...	...	...	...	—	3	—	6
B19 (9)	Malignant neoplasm, prostate	...	...	...	...	4	—	4	—
B19 (10)	Leukaemia	...	...	...	...	2	1	1	2
B19 (11)	Other malignant neoplasms, etc.	...	...	...	...	9	11	17	20
B20	Benign and unspecified neoplasms	...	...	...	...	—	1	3	—
B21	Diabetes mellitus	...	...	...	...	1	1	1	3
B22	Avitaminoses	...	...	...	...	—	—	—	—
B46 (1)	Other endocrine, etc. diseases	...	...	...	...	1	—	1	2
B23	Anaemias	...	...	...	...	1	2	—	1
B46 (2)	Other diseases of blood, etc.	...	...	...	...	—	—	—	—
B46 (3)	Mental disorders	...	...	...	...	—	—	—	3
B24	Meningitis	...	...	...	...	—	1	2	4
B46 (4)	Multiple sclerosis	...	...	...	...	—	1	—	4
B46 (5)	Other diseases of nervous system, etc.	...	...	...	...	3	2	4	2
B25	Active rheumatic fever	...	...	...	...	—	—	—	—
B26	Chronic rheumatic heart disease	...	...	...	...	2	3	3	6
B27	Hypertensive disease	...	...	...	...	3	4	3	6
B28	Ischaemic heart disease	...	...	...	...	77	73	85	69
B29	Other forms of heart disease	...	...	...	...	14	15	7	27
B30	Cerebrovascular disease	...	...	...	...	36	47	35	62
B46 (6)	Other diseases of circulatory system	...	...	...	...	10	12	11	8
B31	Influenza	...	...	...	...	1	3	4	2
B32	Pneumonia	...	...	...	...	20	16	29	69
B33 (1)	Bronchitis and emphysema	...	...	...	...	14	4	22	8
B33 (2)	Asthma	...	...	...	...	2	4	—	2
B46 (7)	Other diseases of respiratory system	...	...	...	...	1	3	1	2
B34	Peptic ulcer	...	...	...	...	3	2	2	2
B35	Appendicitis	...	...	...	...	—	—	—	—
B36	Intestinal obstruction and hernia	...	...	...	...	2	—	—	1
B37	Cirrhosis of liver	...	...	...	...	—	—	2	1
B46 (8)	Other diseases of digestive system	...	...	...	...	1	4	3	3

TABLE A—Municipal Boroughs (1)

Congleton M.B.		Crewe M.B.		Dukin- field M.B.		Ellesmere Port M.B.		Hyde M.B.		Macclesfield M.B.		Sale M.B.		Staly- bridge M.B.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
—	—	—	—	—	—	—	—	—	—	1	—	2	—	—	—
—	—	—	1	—	—	—	—	—	—	1	—	—	—	1	—
1	1	1	—	—	—	—	—	2	—	—	—	—	—	—	—
1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
—	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—
1	1	—	1	1	—	1	—	—	1	—	—	2	—	—	—
—	2	7	3	1	—	1	1	2	—	—	—	—	2	—	1
7	1	12	8	4	3	3	3	5	9	6	4	5	1	3	4
2	9	13	7	4	2	4	8	2	11	11	7	6	9	4	1
1	—	1	—	—	—	2	—	1	—	—	—	1	—	—	—
9	2	21	7	9	—	27	2	18	1	27	1	22	4	12	3
—	6	—	10	—	7	—	11	—	6	—	12	—	13	—	4
—	2	—	6	—	1	—	3	—	5	—	3	—	3	—	1
1	—	6	—	2	—	3	—	2	—	5	—	4	—	3	—
1	—	1	2	—	1	1	—	—	2	1	3	2	2	1	1
5	8	7	17	2	4	7	12	13	8	8	20	24	22	5	10
—	1	—	—	—	—	2	—	—	—	—	1	—	—	—	—
2	2	3	3	2	2	1	2	2	6	1	7	2	3	—	1
—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—
—	—	—	—	—	1	1	2	1	—	1	1	—	1	1	—
—	—	1	2	—	—	1	—	—	1	—	3	1	2	—	—
—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—
—	—	—	2	—	—	—	—	—	1	2	—	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—
—	—	1	—	—	—	—	1	—	—	—	1	—	—	—	—
1	2	3	5	2	1	5	1	2	6	2	2	3	2	2	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	4	3	—	2	2	2	1	3	4	4	3	9	2	1
—	3	5	7	3	1	4	5	—	4	5	12	9	5	2	2
31	24	92	48	40	18	64	35	77	53	92	75	80	74	28	20
5	5	13	20	7	14	2	12	15	12	14	21	5	12	5	13
17	36	47	56	19	22	19	25	44	66	39	43	37	54	19	41
5	9	9	10	1	4	9	6	8	7	2	11	22	20	4	6
1	3	6	9	2	5	2	3	4	8	2	4	3	4	5	3
9	3	14	13	7	27	22	14	30	36	18	29	12	9	16	25
15	4	30	14	7	1	15	3	21	13	16	6	30	7	9	9
—	—	1	1	—	—	—	—	—	—	—	—	1	1	—	—
—	—	5	2	3	4	2	2	1	6	1	1	3	1	2	—
2	—	1	—	1	—	1	—	2	1	2	1	3	1	3	—
—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
1	2	1	3	1	—	1	—	—	—	2	1	1	—	—	1
—	—	—	—	1	—	2	1	—	—	1	3	2	1	—	—
—	3	1	3	1	—	1	5	2	5	2	2	4	1	—	1

CAUSES OF DEATH								Altrincham M.B.		Bebington M.B.	
								M	F	M	F
B38	Nephritis and Nephrosis	...	...	...	...	...	...	1	—	—	1
B39	Hyperplasia of prostate	...	...	...	...	...	...	1	—	1	—
B46 (9)	Other diseases, genito-urinary system	...	...	...	...	...	...	2	1	1	—
B41	Other complications of pregnancy, etc.	...	...	...	...	...	...	—	—	—	—
B46 (10)	Diseases of skin, subcutaneous tissue	...	...	...	...	...	...	1	—	—	1
B46 (11)	Diseases of musculo-skeletal system	...	...	...	...	...	...	—	—	1	2
B42	Congenital anomalies	...	...	...	...	...	...	1	1	3	2
B43	Birth injury, difficult labour, etc.	...	...	...	...	...	...	4	1	4	1
B44	Other causes of perinatal mortality	...	...	...	...	...	...	2	—	—	2
B45	Symptoms and ill-defined conditions	...	...	...	...	...	...	—	4	—	—
BE47	Motor vehicle accidents	...	...	...	...	...	...	3	—	4	4
BE48	All other accidents	...	...	...	...	...	...	2	3	7	2
BE49	Suicide and self-inflicted injuries	...	...	...	...	...	...	2	2	2	1
BE50	All other external causes	...	...	...	...	...	...	1	1	—	1
TOTAL ALL CAUSES								262	253	325	370
LIVE BIRTHS—Total								355	314	479	462
Legitimate								338	295	458	438
Illegitimate								17	19	21	24
STILLBIRTHS—Total								2	3	9	3
Legitimate								2	3	9	3
Illegitimate								—	—	—	—
DEATHS OF INFANTS—Total (under one year of age)								6	3	8	7
Legitimate								5	3	8	7
Illegitimate								1	—	—	—
DEATHS OF INFANTS—Total (under four weeks of age)								6	1	4	3
Legitimate								5	1	4	3
Illegitimate								1	—	—	—
DEATHS OF INFANTS—Total (under one week of age)								6	1	4	3
Legitimate								5	1	4	3
Illegitimate								1	—	—	—
LIVE BIRTHS—Rate per 1,000 population								16.4		16.4	
STILLBIRTHS—Rate per 1,000 total births								7		13	
INFANTILE MORTALITY—(Deaths under 1 year) Rate per 1,000 live births								13		16	
PERINATAL MORTALITY—(Stillbirths and deaths under 1 week) Rate per 1,000 total births								18		20	
DEATHS ALL AGES—Crude rate per 1,000 population								12.7		12.1	
MID-1970 POPULATION								40,710		57,540	
ACREAGE, 1.4.70								3,477		12,235	

TABLE A—Municipal Boroughs (2)

Congleton M.B.		Crewe M.B.		Dukin- field M.B.		Ellesmere Port M.B.		Hyde M.B.		Macclesfield M.B.		Sale M.B.		Staly- bridge M.B.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	1	3	2	—	—	1	—	3	—	3	1	1	1	—	1
1	—	2	—	—	—	—	—	2	—	2	—	1	—	1	—
1	—	—	—	—	1	1	3	2	2	1	3	2	6	2	1
—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
—	—	1	—	—	—	—	—	—	—	—	1	—	—	—	—
—	1	—	2	—	—	1	—	1	1	—	4	—	2	—	—
1	2	1	5	1	—	3	2	—	1	5	—	4	2	3	—
—	—	4	1	—	1	2	2	2	1	—	2	—	1	2	1
1	—	3	4	—	—	4	2	4	3	—	2	—	—	—	1
—	2	20	26	2	6	—	—	10	22	—	—	—	2	1	4
—	1	2	2	2	2	9	—	4	1	10	2	1	3	4	2
1	2	4	3	2	3	4	6	2	3	1	5	6	1	3	—
2	—	3	2	1	1	1	2	4	3	3	1	3	2	1	2
—	—	1	2	—	—	—	—	—	1	1	—	1	—	—	1
126	139	358	313	128	134	231	178	289	310	295	302	309	285	155	169
165	176	397	407	147	126	649	620	343	276	403	343	434	418	229	172
161	166	364	369	135	117	594	583	309	258	370	306	404	386	207	158
4	10	33	38	12	9	55	37	34	18	33	37	30	32	22	14
2	3	8	7	—	2	9	7	2	6	3	5	1	8	3	—
2	3	7	4	—	2	9	7	2	5	3	4	1	7	3	—
—	—	1	3	—	—	—	—	—	1	—	1	—	1	—	—
3	1	12	10	5	5	11	6	8	5	5	7	6	3	5	2
3	1	11	8	3	5	7	5	8	4	5	7	5	3	3	2
—	—	1	2	2	—	4	1	—	1	—	—	1	—	2	—
2	—	8	7	1	1	8	4	7	5	3	4	2	1	3	2
2	—	7	5	1	1	5	4	7	4	3	4	2	1	2	2
—	—	1	2	—	—	3	—	—	1	—	—	—	—	1	—
1	—	7	5	1	1	7	3	6	5	1	4	—	1	2	2
1	—	6	4	1	1	5	3	6	4	1	4	—	1	2	2
—	—	1	1	—	—	2	—	—	1	—	—	—	—	—	—
17.2		15.6		15.7		21.8		16.2		17.8		15.4		18.8	
14		18		7		12		13		11		10		7	
12		27		37		13		21		16		11		17	
17		33		15		20		30		17		12		17	
13.3		12.8		15.1		7.0		15.7		14.3		10.8		15.2	
19,870		51,600		17,340		58,180		38,240		41,870		55,200		21,360	
5,587		4,389		1,725		9,477		4,170		4,787		3,629		3,190	

CAUSES OF DEATH		Alderley Edge U.D.		Alsager U.D.		Bollington U.D.		Bowdon U.D.		Bredbury and Romiley U.D.	
		M	F	M	F	M	F	M	F	M	F
B3	Bacillary dysentery, amoebiasis	—	—	—	—	—	—	—	—	—	—
B4	Enteritis and other diarrhoeal diseases	—	—	—	—	—	—	—	—	—	—
B5	Tuberculosis of respiratory system	—	—	—	—	—	—	—	—	—	1
B6 (1)	Late effects, respiratory	—	—	—	—	—	—	—	—	—	—
B6 (2)	Other tuberculosis	—	—	—	—	—	—	—	—	—	—
B11	Meningococcal infection	—	—	—	—	—	—	—	—	—	—
B14	Measles	—	—	—	—	—	—	—	—	—	—
B18	Other infective and parasitic diseases	—	—	—	—	—	—	—	—	—	—
B19 (1)	Malignant neoplasm, buccal cavity, etc.	1	—	—	—	—	—	1	—	—	—
B19 (2)	Malignant neoplasm, oesophagus	—	—	—	1	—	—	2	—	—	—
B19 (3)	Malignant neoplasm, stomach ...	—	—	3	2	—	—	1	—	4	1
B19 (4)	Malignant neoplasm, intestine ...	1	4	2	1	3	1	2	1	7	5
B19 (5)	Malignant neoplasm, larynx ...	—	—	—	—	—	—	—	—	—	—
B19 (6)	Malignant neoplasm, lung, bronchus	3	1	2	—	6	—	2	—	13	2
B19 (7)	Malignant neoplasm, breast ...	—	2	—	4	—	—	—	—	—	4
B19 (8)	Malignant neoplasm, uterus ...	—	3	—	—	—	—	—	—	—	5
B19 (9)	Malignant neoplasm, prostate ...	—	—	1	—	—	—	—	—	4	—
B19 (10)	Leukaemia	—	—	2	—	—	1	1	1	1	—
B19 (11)	Other malignant neoplasms, etc.	1	5	2	3	3	—	1	—	11	12
B20	Benign and unspecified neoplasms	—	—	—	—	—	—	—	—	—	—
B21	Diabetes mellitus	—	—	—	2	1	—	—	1	1	3
B22	Avitaminoses, etc.	—	—	—	—	—	—	—	—	1	2
B46 (1)	Other endocrine, etc. diseases ...	—	1	—	—	1	—	—	—	—	1
B23	Anaemias	—	—	—	—	—	—	—	—	—	—
B46 (2)	Other diseases of blood, etc. ...	—	—	—	—	—	—	—	—	—	—
B46 (3)	Mental disorders	—	1	—	—	—	—	—	—	—	—
B24	Meningitis	—	—	—	—	—	—	—	—	—	—
B46 (4)	Multiple sclerosis	—	—	—	—	—	—	—	—	—	—
B46 (5)	Other diseases of nervous system, etc.	—	—	—	—	—	—	—	—	—	3
B26	Chronic rheumatic heart disease	—	—	—	1	1	1	—	—	1	2
B27	Hypertensive disease	—	—	1	1	2	2	—	—	3	—
B28	Ischaemic heart disease	7	4	16	6	17	13	2	10	42	31
B29	Other forms of heart disease ...	—	1	3	5	—	5	3	9	7	13
B30	Cerebrovascular disease	2	4	9	5	4	2	7	11	17	33
B46 (6)	Other diseases of circulatory system	1	2	2	1	1	1	—	4	2	8
B31	Influenza	1	—	2	2	2	—	—	2	—	2
B32	Pneumonia	4	5	2	1	—	1	—	—	3	9
B33 (1)	Bronchitis and emphysema	1	1	5	2	1	2	—	1	10	5
B33 (2)	Asthma	1	—	—	—	—	—	—	—	—	—
B46 (7)	Other diseases of respiratory system	—	1	—	—	—	—	—	—	1	4
B34	Peptic ulcer	—	—	1	—	—	—	—	—	1	3
B35	Appendicitis	—	—	—	—	—	—	—	—	—	—
B36	Intestinal obstruction and hernia	—	—	—	—	—	1	—	—	1	—
B37	Cirrhosis of liver	—	—	—	—	—	1	—	—	2	1
B46 (8)	Other diseases of digestive system	—	—	—	—	—	—	—	—	2	5

TABLE A—Urban Districts (1)

Cheadle and Gatley U.D.		Hale U.D.		Hazel Grove and Bramhall U.D.		Hoylake U.D.		Knutsford U.D.		Longden-dale U.D.		Lymm U.D.		Marple U.D.		Middlewich U.D.		Nantwich U.D.		Neston U.D.		Northwich U.D.		Runcorn U.D.		Sandbach U.D.		Wilmslow U.D.		Winsford U.D.		Wirral U.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1	1	—	—	1	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1	2	—	—	—	—	1	—	—	—	—
—	2	—	1	—	—	1	1	1	—	—	1	1	—	1	—	—	—	—	1	—	—	—	1	—	—	—	1	—	—	—	1	—	—
1	—	—	—	1	—	—	2	—	—	1	—	—	—	1	—	—	—	—	2	—	—	1	1	1	1	—	—	2	1	—	2	—	1
7	6	1	1	3	4	7	3	3	3	4	1	1	—	4	5	1	1	3	5	4	1	3	3	8	5	2	1	3	2	2	3	6	1
9	10	3	2	3	3	5	9	—	1	—	1	2	2	7	6	—	—	3	2	2	2	1	4	4	10	—	—	5	3	2	4	3	3
—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
31	5	6	1	11	1	19	4	5	1	—	—	9	3	6	3	3	—	6	—	5	2	8	—	15	2	5	1	9	3	10	2	16	2
—	8	—	1	—	6	—	5	—	4	—	3	—	—	—	4	—	—	—	2	—	5	—	—	5	—	1	—	3	—	3	—	12	—
—	2	—	1	—	2	—	4	—	1	—	—	—	—	—	5	—	—	—	1	—	—	3	—	—	2	—	1	—	3	—	—	—	—
1	—	1	—	1	—	2	—	—	—	2	—	1	—	6	—	—	—	2	—	3	—	1	—	4	—	3	—	—	—	2	—	2	—
2	4	—	2	1	2	2	1	—	1	1	—	—	—	1	—	—	—	1	—	—	1	2	1	—	1	1	—	1	—	—	—	—	—
12	21	2	7	8	12	15	8	9	2	—	2	4	4	4	3	1	2	4	2	1	3	8	5	13	10	3	1	9	11	3	3	8	7
—	1	1	—	1	—	2	—	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	1	—	1	1
4	2	—	1	1	1	2	—	—	1	—	—	1	—	—	—	—	2	—	1	—	—	1	—	—	2	1	1	2	—	—	3	—	1
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	2	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	1
—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	1
—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	—	—	—	—	—	—
1	1	—	1	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
5	3	—	—	2	4	4	—	—	4	2	—	1	1	—	1	2	—	—	—	—	—	—	—	1	2	—	—	—	2	2	1	—	2
4	4	—	1	2	1	2	2	1	1	2	2	1	—	—	3	2	—	—	—	1	5	3	4	1	5	—	2	—	2	3	3	1	3
3	4	2	3	1	2	2	2	1	—	—	1	3	—	2	2	—	1	3	—	3	2	1	2	2	—	1	—	1	1	5	1	4	4
100	47	23	20	48	22	62	61	29	23	22	9	14	4	31	25	8	9	27	7	19	9	31	34	61	30	25	10	43	25	25	13	42	31
11	18	6	11	6	7	7	15	1	7	3	3	1	5	9	5	3	5	5	13	3	7	3	14	4	5	5	5	2	7	6	8	7	12
25	50	5	21	20	35	17	42	19	28	7	14	2	10	15	18	4	10	11	16	7	10	22	23	20	28	11	16	19	23	17	17	17	32
14	10	2	4	11	11	8	22	1	1	1	4	—	3	3	9	—	1	2	3	3	5	2	7	5	13	3	3	7	13	—	4	8	4
—	2	1	—	2	2	2	5	2	1	1	1	—	—	—	—	1	—	3	6	1	1	2	4	10	5	3	2	—	1	5	1	1	—
13	27	3	3	9	6	16	28	4	3	3	6	2	3	4	9	—	—	10	9	6	7	6	3	5	14	5	5	4	16	2	7	14	29
21	4	7	—	13	2	6	8	4	2	4	1	3	1	6	6	1	2	6	6	5	—	15	4	18	4	3	3	6	2	6	4	12	3
1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	8	—	1	—	—	1	1	—	—	—	—	—	1	2	—	1	—	—	1	1	—	3	2	2	2	—	—	—	3	2	2	—	2
2	2	2	2	1	1	—	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1	1	2	1	1	1	—	1	1	—	—
—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	2	1	1	2	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—
2	2	—	1	2	1	—	2	1	3	1	—	1	1	1	1	—	1	—	1	2	—	1	4	1	—	—	—	4	3	—	1	—	2

TABLE A—Urban Districts (1)

Nantwich U.D.		Neston U.D.		Northwich U.D.		Runcorn U.D.		Sandbach U.D.		Wilmslow U.D.		Winsford U.D.		Wirral U.D.		4100 wic U.D.
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	1
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	1	1	—	—	1	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1	2	—	—	—	—	1	—	—	—	—	—
—	1	—	—	—	1	—	—	—	1	—	—	1	—	—	—	—
—	2	—	—	1	1	1	1	—	—	2	1	—	2	—	1	—
3	5	4	1	3	3	8	5	2	1	3	2	2	3	6	1	—
3	2	2	2	1	4	4	10	—	—	5	3	2	4	3	3	—
—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
6	—	5	2	8	—	15	2	5	1	9	3	10	2	16	2	1
—	2	—	5	—	1	—	5	—	1	—	3	—	3	—	12	—
—	1	—	—	—	3	—	2	—	1	—	3	—	—	—	—	—
2	—	3	—	1	—	4	—	3	—	—	—	2	—	2	—	—
1	—	—	1	1	2	1	—	1	1	—	1	—	—	—	—	—
4	2	1	3	8	5	13	10	3	1	9	11	3	3	8	7	—
—	—	—	—	—	—	1	—	—	—	—	1	1	—	1	1	—
—	1	—	—	—	1	—	2	1	1	2	—	—	3	—	1	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	—	—	—	1	—	2	—	—	1	—	—	—	1	1	—
—	—	—	—	—	—	—	1	—	—	—	2	—	—	—	1	—
—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
—	—	—	—	—	—	2	—	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
—	—	—	—	—	—	1	2	—	—	—	2	2	1	—	2	—
—	—	1	5	3	4	1	5	—	2	—	2	3	3	1	3	—
3	—	3	2	1	2	2	—	1	—	1	1	5	1	4	4	—
27	7	19	9	31	34	61	30	25	10	43	25	25	13	42	31	—
5	13	3	7	3	14	4	5	5	5	2	7	6	8	7	12	—
11	16	7	10	22	23	20	28	11	16	19	23	17	17	17	32	—
2	3	3	5	2	7	5	13	3	3	7	13	—	4	8	4	—
3	6	1	1	2	4	10	5	3	2	—	1	5	1	1	—	16.5
10	9	6	7	6	3	5	14	5	5	4	16	2	7	14	29	—
6	6	5	—	15	4	18	4	3	3	6	2	6	4	12	3	—
—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	1	—	3	2	2	2	—	—	—	3	2	2	—	2	—
—	1	—	—	1	1	1	2	1	1	1	—	1	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2	1	—	—	—	—	1	—	1	—	1	—
1	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	8.7
—	1	2	—	1	4	1	—	—	—	4	3	—	1	—	2	160

TABLE A—Urban Districts (2)

Nantwich U.D.		Neston U.D.		Northwich U.D.		Runcorn U.D.		Sandbach U.D.		Wilmslow U.D.		Winsford U.D.		Wirral U.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
—	—	—	—	2	—	4	—	—	—	2	—	1	—	—	—
—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—
—	—	1	—	1	4	—	4	—	1	—	—	1	—	1	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	2	—	—	1	—	—	1	—	3	—	2	—	3
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	2	2	1	—	3	2	—	1	—	1	—	2	—
1	—	1	—	—	—	—	2	1	1	2	—	4	1	—	—
1	—	2	—	1	1	1	—	—	—	—	—	3	3	1	—
—	1	—	—	2	1	—	—	2	6	—	—	2	3	1	—
2	1	1	—	2	1	4	1	2	—	3	1	9	2	2	1
—	1	3	—	1	2	3	3	2	1	2	1	1	2	2	2
—	—	1	2	—	—	1	1	—	—	2	1	2	—	—	—
—	—	—	—	3	—	1	1	—	—	—	1	1	2	—	—
94	87	78	66	128	138	201	165	83	68	131	137	121	99	152	162
93	77	166	151	152	126	318	284	115	124	196	170	316	301	183	165
88	75	164	144	142	119	300	266	112	116	184	159	296	289	177	157
5	2	2	7	10	7	18	18	3	8	12	11	20	12	6	8
1	—	—	2	2	3	7	4	4	2	2	1	7	1	1	1
1	—	—	2	2	3	5	3	3	2	2	1	7	1	1	1
—	—	—	—	—	—	2	1	1	—	—	—	—	—	—	—
3	—	4	2	5	2	9	6	2	2	4	1	11	7	4	—
3	—	4	2	5	2	9	6	2	2	4	1	8	6	4	—
—	—	—	—	—	—	—	—	—	—	—	—	3	1	—	—
3	—	4	1	2	1	2	3	1	2	3	1	9	4	3	—
3	—	4	1	2	1	2	3	1	2	3	1	6	4	3	—
—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—
2	—	2	—	1	1	1	2	1	1	2	—	8	4	2	—
2	—	2	—	1	1	1	2	1	1	2	—	6	4	2	—
—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—
15.2		18.2		14.8		17.8		19.1		12.6		26.4		13.4	
6		6		18		18		24		8		13		6	
18		19		25		25		17		14		29		11	
18		13		25		23		33		14		32		11	
16.2		8.3		14.2		10.8		12.1		9.2		9.4		12.1	
11,170		17,430		18,730		33,840		12,510		29,000		23,380		26,040	
1,179		8,495		2,636		8,045		3,716		7,691		7,094		5,801	

CAUSES OF DEATH					Bucklow R.D.		Chester R.D.	
					M	F	M	F
B3	Bacillary dysentery, amoebiasis	...	...	...	—	—	—	—
B4	Enteritis and other diarrhoeal diseases	...	...	...	—	—	—	—
B5	Tuberculosis of respiratory system	...	...	...	—	—	2	—
B6 (1)	Late effects respiratory tuberculosis	...	...	...	—	—	1	—
					—	—	—	—
B17	Syphilis and its sequelae	...	...	...	—	—	1	1
B18	Other infective and parasitic diseases	...	...	...	—	1	1	—
B19 (1)	Malignant neoplasm, buccal cavity, etc.	...	...	...	—	1	1	1
B19 (2)	Malignant neoplasm, oesophagus	...	...	...	1	—	—	—
B19 (3)	Malignant neoplasm, stomach	...	...	...	1	—	6	7
B19 (4)	Malignant neoplasm, intestine	...	...	...	5	2	5	4
B19 (5)	Malignant neoplasm, larynx	...	...	...	—	—	1	—
B19 (6)	Malignant neoplasm, lung, bronchus	...	...	...	12	—	9	5
B19 (7)	Malignant neoplasm, breast	...	...	...	—	2	—	6
B19 (8)	Malignant neoplasm, uterus	...	...	...	—	3	—	4
B19 (9)	Malignant neoplasm, prostate	...	...	...	3	—	4	—
B19 (10)	Leukaemia	...	...	...	—	—	1	2
B19 (11)	Other malignant neoplasms, etc.	...	...	...	1	4	4	7
B20	Benign and unspecified neoplasms	...	...	...	—	1	—	—
B21	Diabetes mellitus	...	...	...	—	2	1	2
B22	Avitaminoses	...	...	...	—	—	1	—
B23	Anaemias	...	...	...	—	1	—	—
B46 (1)	Other endocrine, etc. diseases	...	...	...	—	—	1	—
B46 (2)	Other disease of the blood, etc.	...	...	...	—	—	—	1
B46 (3)	Mental disorders	...	...	...	—	1	—	3
B24	Meningitis	...	...	...	—	—	—	—
B46 (4)	Multiple sclerosis	...	...	...	—	—	—	—
B46 (5)	Other diseases of nervous system, etc.	...	...	...	4	2	4	—
B26	Chronic rheumatic heart disease	...	...	...	1	2	2	4
B27	Hypertensive disease	...	...	...	2	—	4	6
B28	Ischaemic heart disease	...	...	...	32	19	50	38
B29	Other forms of heart disease	...	...	...	3	4	15	16
B30	Cerebrovascular disease	...	...	...	12	20	28	64
B46 (6)	Other diseases of circulatory system	...	...	...	3	4	8	9
B31	Influenza	...	...	...	4	2	1	1
B32	Pneumonia	...	...	...	3	3	18	34
B33 (1)	Bronchitis and emphysema	...	...	...	6	1	10	4
B33 (2)	Asthma	...	...	...	—	1	1	1
B46 (7)	Other diseases of respiratory system	...	...	...	1	—	—	4
B34	Peptic ulcer	...	...	...	1	—	—	—
B35	Appendicitis	...	...	...	—	—	1	—
B36	Intestinal obstruction and hernia	...	...	...	—	1	—	1
B37	Cirrhosis of liver	...	...	...	1	—	—	1
B46 (8)	Other diseases of digestive system	...	...	...	1	1	2	6

TABLE A—Rural Districts (1)

Congleton R.D.		Disley R.D.		Macclesfield R.D.		Nantwich R.D.		Northwich R.D.		Runcorn R.D.		Tarvin R.D.		Tintwistle R.D.	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	1	—	—	2	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—
—	1	—	—	—	—	1	1	—	—	—	2	—	1	—	—
1	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—
1	3	—	—	1	—	—	2	7	1	1	2	—	1	—	—
1	4	—	—	6	3	6	5	7	1	5	2	4	1	—	—
1	7	3	1	5	5	4	2	3	2	4	8	2	2	1	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	1	4	—	12	3	16	1	26	3	26	4	7	2	1	—
—	2	—	1	—	7	—	3	—	9	—	14	—	4	—	2
—	2	—	—	—	4	—	1	—	2	—	2	—	1	—	1
1	—	1	—	3	—	5	—	1	—	1	—	—	—	—	—
—	—	—	—	4	—	1	1	—	—	—	1	1	—	—	—
4	3	4	—	3	7	8	11	9	17	10	15	4	7	—	—
—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—
—	2	—	—	3	2	1	1	2	3	2	1	—	1	—	—
1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
—	—	—	—	—	1	—	—	1	1	—	—	—	2	—	—
—	—	—	—	2	—	—	—	1	—	3	—	—	1	—	—
—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
—	—	—	—	—	—	—	1	—	1	—	1	—	—	—	—
—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—
1	4	1	—	1	2	2	—	—	1	2	1	2	—	—	—
1	1	—	—	2	1	1	2	1	6	—	1	—	1	—	—
1	3	1	1	2	3	5	3	4	7	7	4	2	—	—	—
24	15	12	5	45	24	48	27	85	37	79	49	27	17	—	1
5	10	—	—	7	8	17	13	8	12	11	16	8	8	—	1
28	39	3	2	16	31	30	38	25	40	37	40	5	15	1	3
6	4	2	3	8	7	5	8	9	14	12	6	2	10	1	—
1	3	1	—	2	2	1	2	1	2	2	6	—	1	1	—
7	7	1	—	9	5	9	10	13	13	16	14	8	6	—	1
2	2	2	1	9	6	9	3	8	2	21	6	6	3	—	—
—	—	—	—	1	1	1	—	—	1	—	—	—	1	—	—
4	—	—	—	4	4	2	1	2	7	2	—	—	—	—	—
1	1	—	—	—	1	2	1	3	2	3	1	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	1	—	2	2	1	—	—
—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—
—	1	—	—	1	1	1	—	2	—	2	2	—	3	—	—

CAUSES OF DEATH								Bucklow R.D.		Chester R.D.	
								M	F	M	F
B38	Nephritis and Nephrosis	...	...	...	...	...	...	—	—	—	1
B39	Hyperplasia of prostate	...	...	...	...	...	...	1	—	—	—
B46 (9)	Other diseases, genito-urinary system	...	...	...	...	...	...	—	2	2	6
B46 (10)	Diseases of skin, subcutaneous tissue	...	...	...	...	...	...	—	—	—	1
B41	Other complications of pregnancy	...	...	...	...	...	...	—	—	—	—
B46 (11)	Diseases of musculo-skeletal system	...	...	...	...	...	...	—	—	—	3
B42	Congenital anomalies	...	...	...	...	...	...	2	—	1	3
B43	Birth injury, difficult labour, etc.	...	...	...	...	...	...	—	1	2	—
B44	Other causes of perinatal mortality	...	...	...	...	...	...	—	1	1	1
B45	Symptoms and ill-defined conditions	...	...	...	...	...	...	—	1	1	1
BE47	Motor vehicle accidents	...	...	...	...	...	...	6	—	2	—
BE48	All other accidents	...	...	...	...	...	...	8	2	1	7
BE49	Suicide and self-inflicted injuries	...	...	...	...	...	...	—	2	1	—
BE50	All other external causes	...	...	...	...	...	...	1	1	1	—
TOTAL ALL CAUSES								115	88	195	255
LIVE BIRTHS—Total								170	163	239	247
Legitimate								158	142	224	232
Illegitimate								12	21	15	15
STILLBIRTHS—Total								5	4	3	1
Legitimate								4	4	2	1
Illegitimate								1	—	1	—
DEATHS OF INFANTS—Total (under one year of age)								2	2	6	4
Legitimate								2	1	5	3
Illegitimate								—	1	1	1
DEATHS OF INFANTS—Total (under 4 weeks of age)								—	2	4	3
Legitimate								—	1	3	2
Illegitimate								—	1	1	1
DEATHS OF INFANTS—Total (under one week of age)								—	2	3	2
Legitimate								—	1	2	1
Illegitimate								—	1	1	1
LIVE BIRTHS—Rate per 1,000 population								15.4		14.7	
STILLBIRTHS—Rate per 1,000 total births								26		8	
INFANTILE MORTALITY—(Deaths under 1 year) Rate per 1,000 live births								12		21	
PERINATAL MORTALITY—(Stillbirths and deaths under 1 week) Rate per 1,000 total births								32		18	
DEATHS ALL AGES—Rate per 1,000 population								9.4		13.6	
MID-1970 POPULATION								21,600		33,040	
ACREAGE, 1.4.70								46,103		43,491	

TABLE A—Rural Districts (2)

Congleton R.D.		Disley R.D.		Macclesfield R.D.		Nantwich R.D.		Northwich R.D.		Runcorn R.D.		Tarvin R.D.		Tintwistle R.D.	
M	F	M	F	M	F	M	F								
—	—	—	—	1	1	1	—	—	1	2	1	2	1	1	—
1	—	—	—	2	—	—	—	2	—	2	—	2	—	1	—
1	1	—	—	—	4	1	—	—	1	3	4	—	—	—	—
—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	2	—	—	—	1	2	2	—	1	—	—
2	—	—	—	3	—	—	2	3	1	2	3	—	—	—	—
1	—	1	1	—	1	4	—	3	3	1	—	2	—	1	—
—	—	—	—	—	1	1	2	—	1	—	1	1	—	1	—
6	24	—	1	—	1	1	7	2	4	1	3	—	—	—	—
1	2	—	—	1	—	1	—	9	1	7	4	1	1	—	—
2	4	1	—	—	1	2	2	3	5	4	4	1	1	—	—
1	—	—	1	2	—	1	—	1	—	3	2	1	1	—	—
—	—	—	—	—	—	—	—	1	4	—	1	—	—	—	—
112	147	37	18	157	142	189	150	243	210	274	229	92	96	9	9
162	141	33	21	179	182	264	244	333	346	323	310	186	139	13	12
153	139	30	20	173	180	255	236	306	331	303	299	179	131	12	11
9	2	3	1	6	2	9	8	27	15	20	11	7	8	1	1
—	2	2	—	2	4	—	3	4	8	5	5	2	5	—	—
—	2	1	—	2	4	—	3	4	7	5	5	1	5	—	—
—	—	1	—	—	—	—	—	—	1	—	—	1	—	—	—
3	1	1	1	2	2	7	5	10	7	4	2	3	—	2	—
3	1	1	1	2	2	6	4	10	7	4	2	3	—	2	—
—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
2	—	1	1	1	2	6	4	4	5	3	2	3	—	2	—
2	—	1	1	1	2	5	3	4	5	3	2	3	—	2	—
—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
2	—	1	—	1	2	5	2	3	5	2	2	3	—	2	—
2	—	1	—	1	2	4	1	3	5	2	2	3	—	2	—
—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—
16.6		13.9		13.3		14.6		16.1		15.0		18.6		17.0	
7		36		16		6		17		16		21		—	
13		37		11		24		25		9		9		80	
13		54		25		20		29		22		30		80	
14.2		14.1		11.0		9.8		10.7		12.0		10.8		12.2	
18,300		3,890		27,170		34,700		42,260		42,090		17,430		1,470	
38,666		2,208		72,533		100,869		57,014		40,663		62,591		1,490	

AGGREGATE IN URBAN DISTRICTS

CAUSE OF DEATH		Sex	All Ages	4 weeks and under 1 year		AGE IN				
				Under 4 weeks	1-4	5-14	15-24	25-34	35-44	
B3	Bacillary dysentery, amoebiasis ...	M	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—
B4	Enteritis and other diarrhoeal diseases ...	M	6	1	2	2	—	—	—	—
		F	3	1	—	2	—	—	—	—
B5	Tuberculosis of respiratory system ...	M	3	—	—	—	—	—	—	—
		F	4	—	—	—	—	—	—	—
B6 (1)	Late effects of respiratory tuberculosis	M	7	—	—	—	—	—	—	—
		F	1	—	—	—	—	—	—	—
B6 (2)	Other tuberculosis ...	M	2	—	—	1	—	—	—	1
		F	1	—	1	—	—	—	—	—
B11	Meningococcal infection ...	M	—	—	—	—	—	—	—	—
		F	1	—	—	—	1	—	—	—
B14	Measles ...	M	—	—	—	—	—	—	—	—
		F	1	—	—	1	—	—	—	—
B17	Syphilis and its sequelae ...	M	1	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—
B18	Other infective and parasitic diseases ...	M	3	—	1	—	—	—	—	—
		F	9	—	—	—	—	—	—	1
B19 (1)	Malignant neoplasm, buccal cavity, etc.	M	15	—	—	—	—	—	—	—
		F	11	—	—	—	—	—	—	—
B19 (2)	Malignant neoplasm, oesophagus ...	M	24	—	—	—	—	—	—	1
		F	24	—	—	—	—	—	—	—
B19 (3)	Malignant neoplasm, stomach ...	M	143	—	—	—	—	1	1	1
		F	89	—	—	—	—	—	—	2
B19 (4)	Malignant neoplasm, intestine ...	M	123	—	—	—	—	1	3	3
		F	146	—	—	—	—	1	3	3
B19 (5)	Malignant neoplasm, larynx ...	M	11	—	—	—	—	—	—	—
		F	1	—	—	—	—	—	—	—
B19 (6)	Malignant neoplasm, lung, bronchus ...	M	380	—	—	—	—	1	10	10
		F	64	—	—	—	—	1	3	3
B19 (7)	Malignant neoplasm, breast ...	M	—	—	—	—	—	—	—	—
		F	162	—	—	—	—	1	12	12
B19 (8)	Malignant neoplasm, uterus ...	F	66	—	—	—	—	2	4	4
B19 (9)	Malignant neoplasm, prostate ...	M	70	—	—	—	—	—	—	—
B19 (10)	Leukaemia ...	M	25	—	—	1	2	3	1	1
		F	31	—	—	1	4	3	1	—
B19 (11)	Other malignant neoplasms ...	M	219	—	—	1	1	4	4	8
		F	255	—	—	2	1	5	12	12
B20	Benign and unspecified neoplasms ...	M	14	—	—	—	—	2	—	2
		F	7	—	—	—	—	—	—	—
B21	Diabetes mellitus ...	M	28	—	—	1	1	—	—	1
		F	52	—	—	—	—	—	—	—
B22	Avitaminoses, etc. ...	M	2	—	—	—	—	—	1	—
		F	3	—	—	—	—	—	—	—
B46 (1)	Other endocrine, etc. diseases ...	M	12	2	—	1	1	1	—	—
		F	16	—	—	1	—	—	—	—
B23	Anaemias ...	M	5	—	—	—	—	—	—	—
		F	17	—	—	1	1	—	—	—
B46 (2)	Other diseases of blood, etc. ...	M	4	—	—	—	—	—	1	—
		F	1	—	—	—	—	—	—	—
B46 (3)	Mental disorders ...	M	5	—	—	—	—	—	—	—
		F	11	—	—	—	—	—	—	—
B24	Meningitis ...	M	5	—	4	—	—	—	—	—
		F	8	—	2	1	—	—	—	—
B46 (4)	Multiple sclerosis ...	M	2	—	—	—	—	—	—	—
		F	12	—	—	1	—	—	—	3
B46 (5)	Other diseases of nervous system ...	M	46	—	1	1	1	2	2	2
		F	46	—	—	—	2	1	2	2

TABLE B (1)

				AGGREGATE IN RURAL DISTRICTS											
YEARS				AGE IN YEARS											
45-54	55-64	65-74	75 and over	All Ages	Under 4 weeks	4 weeks and under 1 year	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—
—	—	1	—	1	—	—	—	—	—	—	—	—	—	1	—
—	—	—	—	2	—	1	—	—	—	—	1	—	—	—	—
—	—	3	—	3	—	—	—	—	—	—	1	—	2	—	—
1	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—
1	—	4	2	1	—	—	—	—	—	—	—	—	—	1	—
—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	1	1	—	—	—	—	—	—	—	1	—	—	—
—	—	—	—	2	—	—	—	—	—	—	—	—	1	—	1
1	—	—	1	2	—	—	—	—	1	—	—	—	1	—	—
—	3	1	4	6	—	—	—	—	—	1	—	1	2	—	2
3	1	3	8	3	—	—	—	—	—	—	—	—	—	1	2
1	4	2	4	4	—	—	—	—	—	—	—	—	2	1	1
4	8	6	5	11	—	—	—	—	—	—	—	—	2	7	2
—	4	7	13	9	—	—	—	—	—	—	1	2	2	2	2
11	47	38	45	36	—	—	—	—	—	—	—	2	8	14	12
2	17	28	40	23	—	—	—	—	—	—	—	3	3	5	12
9	32	42	36	33	—	—	—	—	—	—	1	2	8	11	11
8	23	47	64	33	—	—	—	—	—	—	—	4	4	10	15
—	2	6	3	1	—	—	—	—	—	—	—	—	—	1	—
—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
37	121	161	50	119	—	—	—	—	—	—	—	9	47	43	20
11	17	23	9	19	—	—	—	—	—	—	2	1	6	7	3
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	51	44	29	50	—	—	—	—	—	1	2	8	17	12	10
8	11	22	19	20	—	—	—	—	—	1	3	4	6	6	—
1	15	27	27	19	—	—	—	—	—	—	—	—	1	2	16
2	6	8	1	7	—	—	—	2	—	—	1	—	—	2	2
1	3	12	6	4	—	—	—	—	—	—	—	1	—	1	2
33	61	65	42	47	—	—	—	—	1	3	2	5	13	14	9
29	71	78	57	71	—	—	—	—	—	1	1	10	13	21	25
1	4	3	2	1	—	—	—	—	—	—	—	—	1	—	—
1	2	2	2	2	—	—	—	—	1	—	—	1	—	—	—
3	4	5	13	9	—	—	—	—	—	—	—	1	3	3	2
4	4	20	24	14	—	—	—	—	—	—	1	—	2	3	8
1	—	—	—	2	—	—	—	—	1	—	—	—	1	—	—
—	—	—	3	1	—	—	—	—	—	—	—	—	—	—	1
1	2	2	2	7	—	—	—	1	—	—	—	2	2	2	—
1	1	4	9	1	—	—	—	—	—	—	—	—	—	—	1
—	1	2	2	1	—	—	—	—	—	—	—	—	—	1	—
—	—	3	12	5	—	—	—	—	—	—	—	—	—	1	4
—	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—
—	—	1	—	2	—	—	—	1	—	—	—	—	—	—	1
—	1	1	3	—	—	—	—	—	—	—	—	—	—	—	—
—	—	2	9	7	—	—	—	—	—	—	—	—	—	3	4
—	1	—	—	1	—	1	—	—	—	—	—	—	—	—	—
1	—	3	1	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	3	1	1	2	—	—	—	—	1	—	—	—	—	1	—
5	4	13	15	16	—	—	1	1	1	—	—	2	1	4	6
3	3	11	24	10	—	—	—	—	3	—	—	—	4	1	2

AGGREGATE IN URBAN DISTRICTS

CAUSE OF DEATH				Sex	All Ages	4 weeks and under 1 year		AGE IN				
						Under 4 weeks	1-4	5-14	15-24	25-34	35-44	
B26	Chronic rheumatic heart disease	...		M	46	—	—	—	—	—	1	2
				F	76	—	—	—	—	—	1	2
B27	Hypertensive disease	...		M	74	—	—	—	—	—	—	2
				F	77	—	—	—	—	—	—	—
B28	Ischaemic heart disease	...		M	1,370	1	—	—	—	—	8	32
				F	940	—	—	—	—	—	—	7
B29	Other forms of heart disease	...		M	182	—	—	1	1	—	1	—
				F	331	—	—	—	1	1	1	2
B30	Cerebrovascular disease	...		M	589	—	—	1	—	1	1	7
				F	900	—	—	—	—	—	1	12
B46 (6)	Other diseases of circulatory system	...		M	157	—	—	—	1	—	1	1
				F	226	—	—	—	—	—	1	2
B31	Influenza	...		M	69	—	—	—	—	—	—	—
				F	81	—	1	—	—	—	—	1
B32	Pneumonia	...		M	292	7	7	2	4	—	1	5
				F	431	1	11	1	—	1	—	3
B33 (1)	Bronchitis and Emphysema	...		M	332	—	2	—	—	—	—	1
				F	132	—	2	—	—	1	—	—
B33 (2)	Asthma	...		M	8	—	—	—	—	1	1	—
				F	10	—	—	—	—	—	—	1
B46 (7)	Other diseases of respiratory system	...		M	32	—	9	1	—	—	—	1
				F	50	—	6	1	1	—	—	1
B34	Peptic ulcer	...		M	32	—	—	—	—	1	—	1
				F	23	—	—	—	—	—	—	—
B35	Appendicitis	...		M	1	—	—	—	—	—	—	—
				F	2	—	—	—	—	—	—	1
B36	Intestinal obstruction and hernia	...		M	17	2	2	—	—	—	—	—
				F	16	—	—	1	—	—	—	1
B37	Cirrhosis of liver	...		M	15	—	—	—	—	—	2	—
				F	10	—	—	—	—	—	—	—
B46 (8)	Other diseases of digestive system	...		M	33	—	1	—	—	1	1	—
				F	55	—	—	—	1	2	—	2
B38	Nephritis and nephrosis	...		M	24	—	1	—	—	—	—	1
				F	12	—	—	—	—	—	—	—
B39	Hyperplasia of prostate	...		M	20	—	—	—	—	—	—	—
B46 (9)	Other diseases, genito-urinary system	...		M	24	—	—	—	—	—	1	—
				F	39	1	—	—	—	—	1	3
B41	Other complications of pregnancy, etc.			F	1	—	—	—	—	—	1	—
B46 (10)	Diseases of skin, subcutaneous tissue	...		M	2	—	—	—	—	—	—	—
				F	3	—	1	—	—	—	—	—
B46 (11)	Diseases of musculo-skeletal system	...		M	6	—	—	—	—	—	1	—
				F	31	—	—	—	—	—	1	—
B42	Congenital anomalies	...		M	43	16	11	5	5	3	1	—
				F	32	8	6	5	3	—	2	—
B43	Birth injury, difficult labour, etc.	...		M	32	31	1	—	—	—	—	—
				F	20	20	—	—	—	—	—	—
B44	Other causes of perinatal mortality	...		M	36	36	—	—	—	—	—	—
				F	25	25	—	—	—	—	—	—
B45	Symptoms and ill-defined conditions	...		M	45	—	—	—	—	—	—	—
				F	102	—	—	—	—	—	—	—
BE47	Motor vehicle accidents	...		M	88	—	—	4	8	25	12	8
				F	28	—	—	1	1	5	2	1
BE48	All other accidents	...		M	66	2	6	3	—	13	3	7
				F	57	1	5	1	1	1	1	3
BE49	Suicide and self-inflicted injuries	...		M	40	—	—	—	—	2	6	9
				F	28	—	—	—	—	2	1	8
BE50	All other external causes	...		M	9	1	—	—	—	1	1	4
				F	13	—	—	1	1	1	1	1
TOTAL ALL CAUSES				M	4,839	99	48	24	26	60	54	111
				F	4,793	57	35	17	17	22	26	93

TABLE B (2)

				AGGREGATE IN RURAL DISTRICTS											
YEARS				AGE IN YEARS											
45-54	55-64	65-74	75 and over	All Ages	Under 4 weeks	4 weeks and under 1 year	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and over
7	18	13	5	8	—	—	—	—	—	—	1	2	1	—	4
7	25	19	22	18	—	—	—	—	—	—	—	—	8	2	8
7	13	23	29	28	—	—	—	—	—	—	1	4	4	13	6
6	4	28	39	27	—	—	—	—	—	—	1	—	3	9	14
143	360	458	368	402	—	—	—	—	—	—	12	39	108	123	120
23	106	290	514	232	—	—	—	—	—	—	1	7	26	59	139
2	18	47	112	74	—	—	—	—	—	—	1	4	13	13	43
4	22	64	236	88	—	—	—	—	1	1	—	2	5	16	63
20	95	201	263	185	1	—	—	—	—	—	1	4	27	64	88
16	77	215	579	292	—	—	—	—	1	2	1	7	25	59	197
3	18	61	72	56	—	—	—	—	—	—	—	1	6	21	28
3	8	52	160	65	—	—	—	—	—	—	1	3	7	10	44
5	13	29	22	14	—	—	—	—	1	—	—	4	4	3	2
2	7	32	38	19	—	—	—	—	—	—	—	2	2	5	10
11	20	87	148	84	2	1	—	—	—	—	3	7	8	23	40
7	28	78	301	93	—	2	—	—	—	—	—	3	3	18	67
12	73	145	99	73	1	—	—	—	—	—	1	5	11	29	26
7	18	41	63	28	—	—	—	—	—	—	1	—	4	8	15
2	2	2	—	3	—	—	—	—	—	—	—	1	2	—	—
—	4	4	1	5	—	—	—	—	—	—	1	1	1	2	—
3	8	3	7	15	—	4	1	—	—	—	—	—	4	2	4
—	4	11	26	16	—	1	—	1	—	—	—	1	—	3	10
2	5	13	10	11	—	—	—	—	—	—	—	2	2	3	4
—	4	6	13	6	—	—	—	—	—	—	—	2	1	1	2
1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
—	3	4	6	2	—	—	—	—	—	—	—	1	—	—	1
—	1	5	8	6	—	—	—	—	—	—	—	—	1	3	2
2	3	5	3	2	—	—	—	—	—	—	—	—	2	—	—
5	1	3	1	2	—	—	—	—	—	—	—	1	—	1	—
2	7	8	13	9	—	1	—	—	—	—	1	1	1	1	4
3	9	13	25	14	—	—	—	—	—	—	1	1	2	2	8
7	4	8	3	7	—	—	—	—	—	1	—	1	4	—	1
2	5	—	5	5	—	—	—	—	—	—	—	2	3	—	—
1	2	2	15	11	—	—	—	—	—	—	—	—	1	2	8
—	3	9	11	7	1	—	—	—	—	—	—	—	3	3	—
—	3	8	23	18	—	—	1	—	—	1	—	—	1	7	8
—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—
—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	2	2	—	—	—	—	—	—	—	—	—	2	—
—	1	2	2	3	—	—	—	—	—	—	1	—	—	—	2
1	4	4	21	9	—	—	—	—	—	—	—	1	2	1	5
—	1	1	—	13	2	6	—	1	1	1	1	—	1	—	—
4	2	1	1	9	6	—	2	—	—	—	—	—	1	—	—
—	—	—	—	15	15	—	—	—	—	—	—	—	—	—	—
—	—	—	—	6	6	—	—	—	—	—	—	—	—	—	—
—	—	—	—	4	4	—	—	—	—	—	—	—	—	—	—
—	—	—	—	7	7	—	—	—	—	—	—	—	—	—	—
—	—	4	41	11	—	—	—	—	—	—	—	—	—	—	11
—	—	6	96	42	—	—	—	—	—	—	—	—	—	1	41
10	7	8	6	28	—	—	1	1	13	—	2	2	2	5	2
—	3	7	8	8	—	—	—	—	2	—	—	1	2	—	3
9	6	7	10	23	—	1	—	3	6	2	1	3	3	—	4
3	7	7	27	26	—	1	—	1	—	—	3	1	1	4	15
5	11	4	3	10	—	—	—	—	1	1	1	1	3	2	1
7	5	3	2	6	—	—	—	—	—	—	2	1	2	1	—
2	—	—	—	3	—	—	—	—	1	—	—	—	2	—	—
2	2	2	2	6	—	—	—	—	—	—	1	3	1	—	1
371	1,003	1,535	1,508	1,423	26	14	3	9	27	8	32	106	302	414	482
201	568	1,212	2,545	1,344	19	5	3	4	9	8	25	74	163	288	746

